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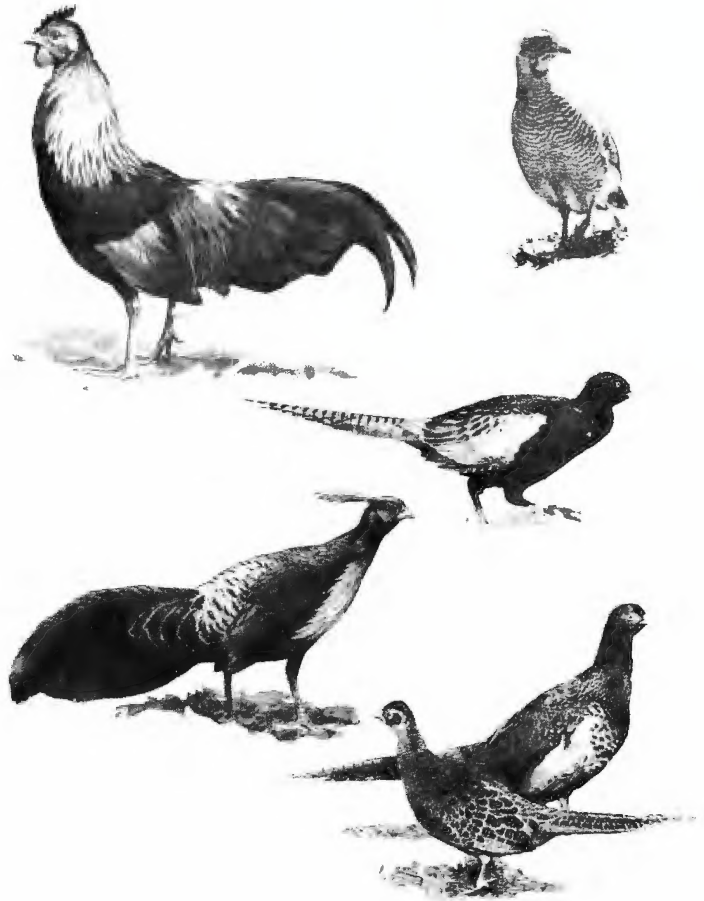
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# SUMMARY OF FOREIGN GAME BIRD PROPAGATION AND LIBERATIONS 1960 to 1963

Black Francolin  
Gray Francolin  
Bamboo Partridge  
Red-Legged Partridge  
Turkish Chukar  
Seesee Partridge  
Sand-Grouse  
Red Junglefowl  
Iranian Pheasants  
Japanese Green Pheasant  
Korean Pheasant  
Afghan Pheasant  
Kalij Pheasant  
Reeves Pheasant  
Himalayan Snowcock



UNITED STATES DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE

BUREAU OF SPORT FISHERIES AND WILDLIFE

Special Scientific Report--Wildlife No. 80

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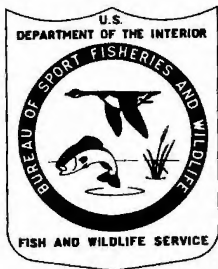


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**SUMMARY OF FOREIGN GAME BIRD  
PROPAGATION AND LIBERATIONS  
1960 to 1963**

By

GARDINER BUMP and WAYNE H. BOHL  
Branch of Wildlife Research  
Bureau of Sport Fisheries and Wildlife



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UNITED STATES DEPARTMENT OF THE INTERIOR

STEWART L. UDALL, SECRETARY

Frank P. Briggs, Assistant Secretary for Fish and Wildlife

Fish and Wildlife Service

Clarence F. Pautzke, Commissioner

Bureau of Sport Fisheries and Wildlife

Daniel H. Janzen, Director

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## THE FOREIGN GAME INTRODUCTION PROGRAM

Year by year the number of individuals seeking relaxation through hunting is increasing. Yet the area available for this sport is slowly decreasing. Likewise, much of the habitat which mothers the game crop is becoming less and less capable of producing shootable surpluses under the impact of clean farming, over-grazing, drainage, power equipment, increased use of insecticides and herbicides, scientific forestry, urbanization, and declining soil fertility.

Faced with this situation, common sense dictates an all-out effort to increase habitat productivity. But there are many habitats which have been so thoroughly changed by man that native game species can no longer maintain themselves therein in numbers sufficient to provide good hunting. Competing interests and the cost of reversing this trend are such that only a part of these lands can be restored to reasonable productivity in the foreseeable future. There are other coverts which never were fully occupied by native game birds or mammals possessing the characteristics requisite to survival in the face of today's intensive hunting pressure. For these, new, adaptable species possessing a high hunting resistance should be sought so that such areas might provide hunting opportunities greater than are now possible. This is the logic behind the foreign game introduction program as developed by the Bureau of Sport Fisheries and Wildlife and its predecessor, the Fish and Wildlife Service, and cooperating State Fish and Game Commissions.

The program is based on requests for assistance from State Commissions following a detailed ecological appraisal of their game-deficient habitats. After analyzing these, biologists are assigned to make a careful study of game species occupying similar habitat and climatic niches in foreign countries. From dozens considered, one or two may then be selected on the basis of their characteristics, habits, reproductive capacity, resistance to predation and disease, relationship to agriculture, ability to withstand heavy hunting pressure, and the possibility of competition with game species native to the United States. Modest, carefully-planned trial introductions of these species, utilizing wild-trapped individuals, carefully quarantined before shipment are then carried out in cooperation with interested State Fish and Game Commissions. Unplanned or "hit and miss" introductions are actively discouraged.

## ABSTRACT

State reports covering the propagation and trial liberation of foreign game birds are summarized for the period 1960 through 1963. Details are then provided in tabular form. Of the 21 species and subspecies and 6 crosses reported, only the sandgrouse and the Himalayan snowcock have not yet been produced in numbers in captivity. Increasing consideration is being given to the production of well-reared birds conditioned for survival in the wild following release. In all, 78,217 individuals, mostly pheasants, are reported to have been raised for trial liberation from breeders provided through the Foreign Game Introduction Program. These releases supplement 16,145 birds wild-trapped and sent to cooperating States for trial release.

While, for most species under trial, it is still too early to evaluate results, some are evident. Iranian pheasants, black francolin and gray francolin have demonstrated an ability to survive, reproduce and increase substantially on release areas. Conversely Indian sandgrouse and two other species have probably failed to adapt themselves and the semi-domestic strain of Reeve's pheasant is barely hanging on. Six other species are maintaining themselves in numbers sufficient to justify guarded optimism.

# SUMMARY OF FOREIGN GAME BIRD PROPAGATION AND LIBERATIONS

## 1960 to 1963

Periodic situation reports are an integral part of any well run research program. Partial reports have been issued from time to time, but with Program personnel generally overseas, it has been difficult to keep track of progress on a countrywide basis.

Program acceptance has been substantial. Cooperative agreements with 45 of the 50 States and with 2 Territories have been signed. Ecological appraisals of problem habitats, prepared by most of these States, cover about 1/5 of the United States. Currently 25 States and Guam are actively rearing and/or testing out foreign species procured through the Foreign Game Introduction Program.

Considerable progress in securing birds sufficient to permit sound trial liberations has been made. Over the period covered by this report 16,145 wild-trapped birds have been delivered to States requesting them for trial release or for breeding stock on State game farms. From the breeders thus provided 78,217 individuals are reported to have been raised, over the past 4 years, to supplement existing releases of wild-trapped stock or to provide additional birds for fresh trials. The majority of these were pheasants.

It is now appropriate to review what is happening to the birds released and to look into the program of raising additional birds on State game farms. To further this objective, Program personnel, under the guidance of State biologists and farm foremen, have made repeated on-the-spot inspections of most of the areas or farms on which foreign species have been liberated or are being propagated. In addition, cooperating States were requested to fill out a questionnaire covering a brief summary of activities and results for the period 1960-1962. This analysis was condensed and issued as Progress Report Number 12. The present Report carries these operations through 1963. To facilitate comparison and preserve continuity most records of previous years operations are repeated in the present tabular presentation. Included also, for the record, are reports on four species, subspecies or crosses of foreign game birds with which various States have been experimenting on their own and for whom the parent stock was not secured under the State-Federal Foreign Game Introduction Program.

### RELEASES AND RESULTS

Trial liberations of 16 species or subspecies and of 5 pheasant crosses are currently underway in 23 States and Guam. Twelve of these occupy farm and adjacent brush or waste lands. Ten of the twelve are pheasants. Six are potentially adaptable to range and dry or irrigated farmlands; three are woodland species. Areas in which these are being tried lie in the central, southern, southwestern and far western States.

Release areas were, by necessity, selected mostly by State biologists, largely from photographs and written descriptions of habitat, climate and other conditions existing within the native range of a species. Selections varied from completely suitable to unsuitable, so Program biologists are now attempting to evaluate each new area in advance.

The numbers of birds released on an area have varied from 11 to over 1000 birds a year. Follow-up releases of additional birds on the same area have been all too few, thus impairing the chances of successful establishment.

Although it is generally believed that wild-trapped birds liberated by the gentle-release method will wander less, the records here presented shed little light on this point. Indian sandgrouse, gray francolin, chukars and the ring-necked pheasant group are apt to wander widely following release; black francolin normally spread out slowly from the point of liberation.

When the Program was started some biologists expressed fear that foreign species, if successful, might adversely affect native game birds. State biologists have been alert to this possibility, but no evidence has been reported to date to substantiate this view.

In the current year the Nevada Commission liberated the Himalayan snowcock. No other new birds, or wild-trapped individuals of species already under trial, have been released. State game farms have been remarkably successful in producing most of the species recommended for trial, in numbers sufficient to continue releases where required. In 1963, 25 States liberated 23,958 farm raised individuals of 19 species, mostly to supplement releases previously undertaken.

#### Current Status of State Releases by Species

While, for most species under trial, it is still too early to evaluate results, some are evident. Iranian pheasants, black francolin, and gray francolin have definitely demonstrated an ability to survive, reproduce and increase substantially on a number of release areas. Conversely Indian sandgrouse have disappeared and Reeve's pheasants, though tried in substantial numbers in several States, are barely hanging on. Six other species are maintaining themselves in numbers sufficient to justify guarded optimism and two others have probably failed.

The coturnix quail, liberated in very large numbers between 1956 and 1961 by many States, apparently failed to take. It was not recommended for trial by the Foreign Game Introduction Program and is not considered further in this report.

The current status, by species, may be summarized as follows:

Black francolin - Apparently established in Louisiana and showing promise in South Carolina, Florida, New Mexico, Hawaii and Guam.

Gray francolin - Apparently established in Hawaii and showing promise in Guam, Nevada and possibly Texas.

Bamboo partridge - Only a few small liberations made to date. Results inconclusive but not particularly encouraging.

Red-legged partridge - Considerable evidence of survival in eastern Washington; results elsewhere inconclusive.

Turkish chukar - Increasing in several areas in California and possibly northwestern New Mexico; merged with Indian chukars in Utah and apparently failed to take elsewhere.

Barbary partridge - Marginal survival in California and Hawaii to date. Not introduced under the F.G.I.P.

Seesee partridge - Only two small liberations to date. No reproduction observed.

Indian sandgrouse - No recent reports of birds either in Nevada or Hawaii, the only two States in which they were introduced.

Red junglefowl - The first release in Oklahoma in 1962 scattered widely without observed reproduction. Small numbers liberated in four States in 1963.

Western Iranian pheasant - Highly successful in Virginia where pheasants have been reported from over 40 counties. On one Kentucky release area 57 broods reported in 1963. Survival and reproduction indicated in South Carolina, Florida, Alabama, Tennessee and Arkansas. Decreasing in Missouri. Temperatures in the native range of the Iranian pheasant vary from 95°F in summer to 25°F in winter. These pheasants have been extensively crossed with northern ringnecks in captivity in hopes of securing a bird possessing good survival south of the ringneck range and north of the Gulf States where temperatures approximate those of the Iranian's native range.

Eastern Iranian pheasant - Good survival and reproduction noted in Missouri and Iowa but showing much less promise in Virginia, Kentucky and Tennessee than is the western Iranian subspecies.

Japanese Green pheasant - Maintaining fair to good abundance in eastern Virginia and reproducing in Tennessee. Results elsewhere inconclusive with some failure reported. This species successfully introduced into Hawaii some years ago.

Korean pheasant - Reproduction noted in Pennsylvania. All other releases made in 1963.

Afghan white-winged pheasant - Good reproduction in Oklahoma. In Missouri 66 broods reported on one liberation area.

Kalij pheasant - First release in 1963, in Virginia. One brood reported.

Reeve's pheasant - Maintaining itself in Hawaii. Disappeared in Arkansas. From large numbers released in Ohio and Kentucky only a few groups of birds are currently reported. The breeders from which this stock was raised were obtained from private game farms not connected with the F.G.I.P. Recently wild-trapped stock has been secured and is being successfully propagated.

Elliot's pheasant - Released, apparently without success in Ohio. Not introduced under the F.G.I.P.

Erkel's francolin - Maintaining small numbers in Hawaii. Releases made by private individuals in California are said to have failed. Not introduced under the F.G.I.P.

Himalayan snowcock - First released in Nevada in 1963. Not introduced under the F.G.I.P.

#### ADAPTABILITY OF SPECIES TO COVER TYPES AND GEOGRAPHIC AREAS

In considering releases and in planning future trials it might be helpful to list again for ready reference the predominant cover favored by various species in their native range and the principal regions of the United States to which they might be climatically adapted.

##### Predominant Cover Favored by Various Species

| <u>Cultivated lands</u> | <u>Woodlands</u> | <u>Dry, cultivated areas and grassy-weedy ranges</u> |
|-------------------------|------------------|--|
| black francolin         | red junglefowl   | gray francolin                                       |
| bamboo partridge        | kalij pheasant   | red-legged partridge                                 |
| Iranian pheasant        | Reeve's pheasant | Turkish chukar                                       |
| Japanese green pheasant |                  | seesee partridge                                     |
| Korean pheasant         |                  | Afghan pheasant                                      |

## Principal Areas of Climatic Adaptability of Various Species

### Mid-Atlantic

Korean pheasant  
Western Iranian pheasant crosses  
Japanese green pheasant  
White-crested kalij pheasant  
Reeve's pheasant

### Southeast

Black francolin  
Bamboo partridge  
Red junglefowl  
Western Iranian pheasant  
Japanese green pheasant  
White-crested kalij pheasant

### Midwest

Korean pheasant  
Iranian pheasant crosses  
Japanese green pheasant  
Reeve's pheasant

### Rocky Mountains

Turkish chukar  
Seesee partridge  
Korean pheasant  
Afghan white-winged pheasant  
White-crested kalij pheasant  
Reeve's pheasant

### Southwest

Black francolin  
Gray francolin  
Red-legged partridge  
Turkish chukar  
Seesee partridge  
Red junglefowl  
Afghan white-winged pheasant  
Eastern Iranian pheasant  
White-crested kalij pheasant

### Pacific

Black francolin  
Bamboo partridge  
Red-legged partridge  
Turkish chukar  
Seesee partridge  
Red junglefowl  
Korean pheasant  
Afghan white-winged pheasant  
Japanese green pheasant  
White-crested kalij pheasant  
Reeve's pheasant

## PROPAGATION OF FOREIGN GAME BIRDS BY SPECIES

Many biologists believe that State game farms have outlived their usefulness. If so the current Program has returned to them their historical reason for existence. Without them it is probable that the successful acclimatization of the pheasant and the chukar would have been long-delayed.

Most foreign countries will not permit the exportation of native species in numbers needed to complete satisfactory trials in the United States. The only alternative is to rear thrifty birds, adequately conditioned for survival in the wild, in numbers sufficient to supplement these trials.

Realizing this, 25 States are now utilizing breeding stock secured through the Foreign Game Introduction Program to produce additional birds for trial release. Ten of these are now devoting their game rearing facilities exclusively to the production of foreign game species. The list includes two francolins, five partridges, seven pheasants and two kinds of sandgrouse. All except the last named are currently being raised in fair to substantial numbers on State farms. In fact, over the past four years 99,796 foreign game birds are reported as reared on the State game farms. Most of these are pheasants. Overall about three-quarters of the birds raised were from breeding stock provided by the F.G.I.P. In 1963, 23,939 individuals representing 15 species or subspecies were produced for trial release.

These farms can provide the birds required to complete the trials begun with wild-trapped stock. But unless vigorous individuals, well-conditioned for survival in the wild, are produced the farms also could seriously impede progress through the production of substandard stock. In some instances this is exactly what is happening. For this reason Program personnel have had to maintain frequent contacts with State biologists and with the men rearing the birds, to offer technical assistance and advice. This service has been well-accepted and is resulting in a substantial improvement both in the numbers of birds produced and in the quality of the stock available for trial.

#### Current Status of Attempts to Propagate Foreign Species

As in most other fields, communication is our biggest problem. Some States have been highly successful in breeding a given species, others have failed to rear more than a few birds, have been puzzled by their lack of success, and have not known where to turn for assistance. The reasons for these differences are oftentimes discernible if one compares practices and results State by State. Therefore, in addition to periodic service contacts with cooperating States by Program personnel, a record of breeding and rearing activities by species, States and years has been assembled. This shows at a glance, some of the propagation techniques being utilized and the degree of success achieved with each species. It also helps to pinpoint some of the probable areas or causes of failure which might be corrected with the proper technical assistance.

Progress by species, with particular reference to results obtained in 1963 may be summarized as follows:

Black Francolin - Thirteen game farms in 11 States reared 1025 birds in 1963. About half of these were produced by the Virginia game farm. The species is not difficult to propagate. Major problems are egg production and getting newly hatched chicks to start eating.

Gray Francolin - Five States raised 1082 birds. Three-quarters of these were reared on the Texas game farm, on which production was a remarkable 37 eggs per hen. Overall, 93 percent of the chicks hatched were reared.

Bamboo Partridge - Seven States produced 1263 birds. Low egg fertility continues to be the major problem with this species.

Red-legged Partridge - Among the 6 States that raised a total of 5223 birds, the production at the Washington, California, and Texas State game farms was outstanding. The red-legged partridge from France is easy to propagate. Little progress has been made in securing satisfactory egg production from the Spanish subspecies.



Seesee Partridge - There was no record of this species being raised in captivity until Oklahoma succeeded in 1960. In 1963, this State and Utah produced 107 birds. Egg fertility was fairly good; chick survival excellent. Egg production has been low but is improving.

Turkish Chukar Partridge - Large numbers of this species have been reared by New Mexico since 1959. In 1963, 2 States raised 1693 birds.

Greek Chukar Partridge - From wild stock, recently secured, California reared 183 individuals.

Barbary Partridge - California, the only State working with this species, produced 1254 birds in 1963. The record indicates that no particular problems were encountered. Brood stock was secured from private game farms.

Common Indian and Imperial Sandgrouse - Utah has been experimenting with a few of each species since 1961. Only one egg has been produced to date.

Red Junglefowl - In an attempt to locate a woodland species potentially adaptable to the Southeast, 9 States, currently working with this species, reared 1416 birds. Junglefowl seemingly adapt well to captivity and are easy to propagate in numbers.

Western Iranian Pheasant - Both this and the eastern Iranian pheasant reproduce well in captivity. When crossed with the northern ringneck, production is markedly increased. This year 6 States reared 1960 pure strain birds and 4602 crosses. No special techniques are required.

Eastern Iranian Pheasant - The fact that this subspecies is somewhat easier to propagate than is its western relative has encouraged its rearing by many States. In the current year 4 States produced 2512 pure strain birds; 6 raised 2667 individuals that were crossed with the northern ringneck.

Japanese Green Pheasant - This subspecies adapts itself very well to propagation in captivity. No problems were reported by 5 States in producing 2619 birds this year. That it crosses easily with the northern ringneck in captivity was demonstrated by the production of 1236 such hybrids by Tennessee in 1963. They also found evidence that this subspecies may breed 2 to 3 weeks later in captivity than does the ringneck.

Korean Ringneck Pheasant - First produced in fair numbers in Missouri and Pennsylvania in 1962. Four northern States reared 3522 birds this year thus providing numbers adequate for more substantial trials in 1963. No difficulty in propagation indicated.

Afghan White-winged Pheasant - After a slow start this species is now responding well to game farm propagation. Four States produced 3254 birds in 1963 with New Mexico far in the lead.

Kalij Pheasant - Three States have found this species relatively productive in captivity. In 1963, from a small breeding stock 382 individuals were reared.

Reeve's Pheasant - Many States have demonstrated the possibility of rearing large numbers of this species from breeding stock that have endured many generations in captivity. The survival of such birds in the wild has been so poor that game farm production has been decreased materially with but 3 States producing 1911 birds this year. Problems associated with breeding wild-trapped birds, secured in France are being gradually resolved by Tennessee and Missouri, with the production of 115 birds in 1963.

Reviewing this record it is evident that State game farms are capable of producing many foreign species in quantities required to permit adequate tests of their adaptability to game habitats in the United States. In terms of quality and survival potential following release, there is great variation among the birds reared on State game farms. While hand-reared birds are not considered to be the equal of wild-trapped individuals for test purposes, it is entirely possible to produce reasonably suitable stock in captivity. Encouraging progress in this project can be reported.

A more detailed record of propagation techniques and results by species and States for 1960-1963 is presented in Table 2.

FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963

| Species  | State    | Year | Number<br>Re-<br>leased | Source | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area             | Results to Date   |
|--|----------|------|-------------------------|--------|--------------------------------|--------------------------|------------------|---|
| Black<br>francolin<br>( <u>Francolinus</u><br><u>francolinus</u><br><u>asiae</u> ) | Alabama  | 1960 | 109                     | wild   | direct                         | November                 | Autauga County   | Poor  |
|  |          | 1962 | 138                     | "      | "                              | February                 | Henry County     | Not reported  |
|  |          | 1962 | 65                      | farm   | "                              | March                    | " "              | Not reported  |
|  |          | 1963 | 91                      | "      | "                              | May, Sept.               | Limestone County | Few seen  |
|  | Arkansas | 1960 | 140                     | wild   | gentle                         | Spring                   | Wattensaw G.M.A. | One brood reported. Few birds seen.   |
|  |          | 1960 | 86                      | "      | "                              | "                        | Camp Robinson    | No birds reported after Feb. 1961.<br>Dispersed up to 7 miles.                                    |
|  |          | 1963 | 66                      | farm   | direct                         | April                    | Big Lake Area    | Dispersed. No broods reported.  |
|  |          | 1963 | 28                      | "      | "                              | "                        | Wattensaw G.M.A. | Dispersed. No broods reported.  |
|  | Florida  | 1961 | 40                      | wild   | direct                         | June                     | Avon Park G.M.A. | Many birds and 1 brood seen.  |
|  |          | 1962 | 70                      | "      | "                              | February                 | Avon Park G.M.A. | Many birds seen; 3 broods of 6<br>to 8 chicks each reported.                                      |
|  |          | 1962 | 70                      | "      | "                              | February                 | Belle Glade      | One nest destroyed by fire.<br>Good survival; 3 mile dispersal.                                   |
|  |          | 1963 | 0                       | -      | -                              | -                        | - -              | Birds and broods reported on both<br>areas.   |
|  | Guam     | 1961 | 171                     | "      | "                              | April                    | Naval Magazine   | Three observed May 1962.  |
|  |          | 1961 | 11                      | "      | gentle                         | May                      | Mangilao         | Last seen March 1962.   |
|  |          | 1963 | 0                       |        |                                |                          |                  | Reproduction observed; birds<br>frequently seen within few miles<br>of release site.              |
|  | Hawaii   | 1960 | 257                     | wild   | gentle                         | Feb., Sept.              | Four islands     | Surviving on 4 islands, doubtful  |
|  |          | 1962 | 491                     | "      | "                              | Jan-Apr.                 | Three islands    | on 1. Thirty individuals seen or<br>heard calling on Molokai. For<br>details see FGIP Report #12. |
|  |          | 1963 | 0                       |        |                                |                          |                  | Birds seen on all islands except<br>Lanai, though nowhere are they<br>abundant.                   |

# FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species                         | State     | Year | Number<br>Re-<br>leased | Source | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area                | Results to Date  |
|---------------------------------|-----------|------|-------------------------|--------|--------------------------------|--------------------------|---------------------|--|
| Black<br>francolin<br>(cont'd.) | Kentucky  | 1961 | 80                      | wild   | direct                         | June                     | Henderson County    | Seven broods seen in 1961.<br>Dispersed up to 11 miles.  |
|                                 |           | 1962 | 181                     | "      | "                              | May                      | Henderson County    | Two nests and 15 broods seen.  |
|                                 |           | 1963 | 50                      | farm   | "                              | October                  | " "                 | Five broods recorded, totaling 18<br>chicks. Population declining prior<br>to release of pen-reared birds in<br>fall of 1963.          |
|                                 | Louisiana | 1961 | 152                     | "      | gentle                         | Mar-Apr                  | Moorehouse Parish   | Many birds and five nests reported.<br>One bird killed 25 miles away.  |
|                                 |           | 1961 | 110                     | "      | "                              | Mar-Apr                  | Gum Cove Area       | Many birds and two broods reported.<br>Spread four miles.  |
|                                 |           | 1962 | 190                     | "      | "                              | May                      | Moorehouse Parish   | Many birds and five nests located.<br>Ten unbanded males seen.<br>Reproduction good. Calling fre-<br>quently except Sept. through Feb. |
|                                 |           | 1962 | 201                     | "      | "                              | February                 | Gum Cove Area       | Many birds seen and heard. Some<br>without bands.  |
|                                 |           | 1963 | 0                       |        |                                |                          | Both Areas          | Number increasing, optimistic of<br>establishment. Birds reported<br>25 miles from original release site.                              |
|                                 | Nevada    | 1960 | 235                     | "      | direct                         | Spring                   | Moapa-Virgin Valley | Birds and broods reported.   |
|                                 |           | 1961 | 50                      | "      | "                              | "                        | " " "               | Four broods observed. Birds<br>holding their own.  |
|                                 |           | 1962 | 185                     | "      | "                              | "                        | " " "               | Many adults calling. Breeding<br>indicated. Broods secretive and<br>difficult to observe.  |
|                                 |           | 1962 | 92                      | "      | "                              | "                        | Mason Valley        | Reproduction not apparent but<br>steady number of birds still<br>being seen and heard.   |
|                                 |           | 1963 | 0                       |        |                                |                          |                     |  |

FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species                         | State             | Year | Number<br>Re-<br>leased | Source | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area                               | Results to Date   |
|---------------------------------|-------------------|------|-------------------------|--------|--------------------------------|--------------------------|------------------------------------|---|
| Black<br>francolin<br>(cont'd.) | New Mexico        | 1962 | 262                     | farm   | direct                         | May                      | Redrock, Grant<br>County           | One brood reported. Dispersion<br>up to 5 miles   |
|                                 |                   | 1962 | 188                     | "      | "                              | "                        | Deming, Luna<br>County             | Pairing occurred soon after<br>release. One brood seen.<br>Spread up to 7 miles.                            |
|                                 |                   | 1963 | 0                       |        |                                |                          |                                    | Encouraging results with fair<br>reproduction observed.   |
|                                 | Oklahoma          | 1960 | 220                     | wild   | direct                         | April                    | Blane and Grady<br>Counties        | Reproduction. Birds found in<br>tamerack, willow, sunflower and<br>Johnson grass.                           |
|                                 |                   | 1961 | 662                     | "      | "                              | Mar-Apr                  | " "                                | Reproduction  |
|                                 |                   | 1962 | 292                     | "      | "                              | February                 | Kingfisher, Blane<br>and Grady Co. | Excellent survival. No repro-<br>duction noted. See FGIP progress<br>report #12 for details                 |
|                                 |                   | 1963 | 0                       |        |                                |                          |                                    | Few birds seen in area check-ups.   |
|                                 |                   | 1960 | 92                      | "      | "                              | August                   | Belmont G.M.A.                     | One 2 to 3 weeks old brood<br>seen in November  |
|                                 | South<br>Carolina | 1960 | 30                      | "      | "                              | April                    | York County<br>Prison farm         | Some still present in 1962.   |
|                                 |                   | 1960 | 88                      | "      | "                              | August                   | Santee-Cooper<br>G.M.A.            | Reproduction noted.   |
|                                 |                   | 1961 | 52                      | "      | "                              | April                    | Belmont G.M.A.                     | Birds and broods still present<br>in fall 1962.   |
|                                 |                   | 1961 | 52                      | "      | "                              | April                    | Santee-Cooper<br>G.M.A.            | Birds frequently heard. About 25<br>to 30 young observed summer<br>of 1962.                                 |
|                                 |                   | 1962 | 100                     | "      | "                              | May                      | Hester farm                        | Reproduction noted.   |
|                                 |                   | 1963 | 0                       | -      | -                              | -                        | -                                  | Broods and adults reported at<br>Santee-Cooper, York and Hester<br>Farm. None seen nor heard at<br>Belmont. |

# FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species  | State     | Year | Number<br>Re-<br>leased | Source | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area                                       | Results to Date  |
|--|-----------|------|-------------------------|--------|--------------------------------|--------------------------|--|--|
| Black<br>francolin<br>(Cont'd.)  | Tennessee | 1963 | 76                      | farm   | gentle                         | October                  | Dyer County                                | Too early to tell  |
|  | Virginia  | 1960 | 48                      | wild   | "                              | May                      | Hog Island G.M.A.                          | Disappeared. One bird reported<br>about 25 miles away in 1962.   |
|  |           | 1962 | 33                      | farm   | "                              | June                     | Cumberland forest                          | Too recent for comment.  |
|  |           | 1963 | 307                     | "      | direct                         | Apr.Aug.,<br>Sept.       | Cumberland and<br>Lancaster Cos.           | Not known  |
| Gray<br>francolin<br>( <u>Francolinus</u><br><u>pondicerianus</u><br><u>interpositus</u> ) | Guam      | 1961 | 145                     | wild   | "                              | May                      | N.W.field area                             | Three broods observed June<br>and July 1962  |
|  |           | 1961 | 30                      | "      | "                              | "                        | Anderson AFB                               | Not reported.  |
|  |           | 1961 | 13                      | "      | "                              | "                        | Dept.of Agri-<br>culture area,<br>Mangilao | One brood seen July 1962   |
|  |           | 1963 | 0                       | -      | -                              | -                        | -  | Reproduction observed. Two<br>broods, 5 and 6 young, and 3<br>one-third grown young netted<br>with doves June 12 at N.W.Field;<br>one, similar-sized, May 3 at<br>Mangilao. Birds frequently seen<br>within few miles of release site. |
|  | Hawaii    | 1960 | 66                      | wild   | gentle                         | December                 | Maui                                       | Reproducing on Hawaii and Maui.  |
|  |           | 1960 | 66                      | "      | "                              | "                        | Lanai                                      | Seem to be established on Lanai.   |
|  |           | 1961 | 115                     | "      | "                              | May                      | Hawaii                                     | Pairing noted January through  |
|  |           | 1961 | 127                     | "      | "                              | May-Dec.                 | Maui                                       | May except on Lanai where rearing  |
|  |           | 1961 | 100                     | "      | "                              | May                      | Lanai                                      | of young was observed through  |
|  |           | 1961 | 100                     | "      | "                              | "                        | Kauai                                      | September. Maximum brood size  |
|  |           | 1962 | 197                     | "      | "                              | Feb-Mar.                 | Hawaii                                     | noted was 8. Most birds have re-   |
|  |           | 1962 | 239                     | "      | "                              | Jan-May                  | Maui                                       | mained in release area but one   |
|  |           | 1962 | 259                     | "      | "                              | Jan-Mar.                 | Lanai                                      | pair noted 14 miles from point of  |
|  |           | 1962 | 160                     | "      | "                              | Mar-May                  | Molokai                                    | release. Birds found commonly in   |
|  |           | 1962 | 275                     | "      | "                              | Mar-Apr                  | Kauai                                      | three different vegetative zones.  |

FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species                        | State               | Year      | Number<br>Re-<br>leased | Source | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area                | Results to Date   |
|--------------------------------|---------------------|-----------|-------------------------|--------|--------------------------------|--------------------------|---------------------|---|
| Gray<br>francolin<br>(cont'd.) | Hawaii<br>(cont'd.) | 1963      | 0                       |        |                                |                          |                     | Adults and broods reported from all islands except Kauai. Lanai continues most encouraging with average brood size 8.3 young and expansion of range continues. Generally, this species continues to be the most promising import in the State |
|                                | Nevada              | 1959-1960 | 1325                    | wild   | direct                         | winter, spring           | Moapa-Virgin Valley | Nine broods noted 1960-1961. Dispersed several miles.   |
|                                |                     | 1960-1961 | 421                     | "      | "                              | winter, spring           | Pahranagat Valley   | Seven broods confirmed.   |
|                                |                     | 1959-1961 | 250                     | "      | "                              | winter, spring           | Mason Valley        | Several broods observed. Birds survived -14°F in winter 1960-61.  |
|                                |                     | 1961-1962 | 262                     | "      | "                              | spring                   | Mason Valley        | Reproduction continuing in 1962 sometimes within 2 months of release.   |
|                                |                     | 1963      | 0                       | -      | -                              | -                        | -                   | Continued reproduction noted in Moapa and Mason Valleys. Population appears to be declining in Paharangat Valley, possibly due to lack of diversified agriculture and particularly a lack of cereal crops.                                    |
|                                | New Mexico          | 1962      | 139                     | "      | "                              | May                      | Cliff, Grant County | Two broods reported. Birds seen feeding on greens.  |
|                                |                     | 1962      | 199                     | "      | "                              | "                        | Deming, Luna County | Several broods observed in July and August. Spread up to 8 miles.   |
|                                |                     | 1963      | 0                       | -      | -                              | -                        | -                   | Scant reproduction noted.   |

FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960 - 1963 (continued)

| Species  | State    | Year | Number Re-leased | Source | Direct or Gentle Release | Month of Re-lease    | Area             | Results to Date   |
|--|----------|------|------------------|--------|--------------------------|----------------------|------------------|---|
| Gray francolin (cont'd.)                           | Oklahoma | 1960 | 210              | wild   | direct                   | April                | Greer County     | Found mainly in mesquite, shin-oak, sand plum and skunkbush cover.                              |
|  |          | 1961 | 462              | "      | "                        | "                    | Greer County     | Ten broods reported with from 6 to 14 chicks  |
|  |          | 1962 | 481              | "      | "                        | "                    | Harmon County    | Heavy hail and rain in June destroyed two nests.  |
|  |          | 1963 | 0                |        |                          |                      | Greer County     | A few birds seen without leg bands.   |
| Texas  |          |      |                  |        |                          |                      | Harmon County    | Dispersion now extends up to 50 miles.  |
|  |          |      |                  |        |                          |                      |                  |   |
| Texas  |          | 1959 | 270              | "      | "                        | "                    | McCulloch County | Moved from range towards farmlands. Broods reported.  |
|  |          | 1963 | 683              | farm   | "                        | May, July, September | McCulloch County | Good survival. 6 broods observed. Dispersion up to 6 miles.                                     |
| Bamboo partridge (Bambusicola thoracica thoracica) | Alabama  | 1962 | 26               | farm   | direct                   | February             | Green County     | Excellent survival. Some breeding   |
|  |          | 1963 | 32               | "      | "                        | April                | "                | Some seen. No broods reported.  |
|  |          |      | 79               | "      | "                        | August               | "                |   |
|  |          |      |                  |        |                          |                      |                  |   |
| Arkansas   |          | 1962 | 50               | "      | "                        | April                | Wattensaw Area   | One brood reported.   |
|  |          | 1963 | 70               | "      | "                        | "                    | "                | Birds seen and heard until mid-summer. One brood located.                                       |
|  |          |      | 120              | "      | "                        | "                    | Big Lake Area    | Dispersed. No broods seen.  |
| Hawaii   |          | 1959 | 140              | wild   | "                        | spring               | Maui             | One brood located 1960. Dispersed 1½ miles by 1961. Preferred cover was <u>Acacia decurrens</u> |
|  |          | 1963 | 0                |        |                          |                      |                  | A maximum of 4 birds heard calling.   |



FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species   | State      | Year | Number<br>Re-<br>leased | Source | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area                              | Results to Date  |
|---|------------|------|-------------------------|--------|--------------------------------|--------------------------|-----------------------------------|--|
| Bamboo<br>partridge<br>(cont'd.)  | Missouri   | 1961 | 37                      | farm   | direct                         | March                    | Scott County                      | Disappeared  |
|   |            | 1961 | 69                      | "      | "                              | "                        | New Madrid                        | Disappeared  |
|   | Oregon     | 1962 | 30                      | "      | "                              | July                     | Broadbent Area                    | No report to date.   |
|   |            | 1963 | 0                       | "      | "                              | "                        | Coos County                       | Landowner reports occasional sightings in release area.                  |
|   | Tennessee  | 1963 | 200                     | "      | gentle                         | October                  | Gibson County                     | Too early to tell.   |
| Spanish<br>red-legged<br>partridge<br>( <u>Alectoris</u><br><u>rufa hispanica</u> ) | Colorado   | 1961 | 23                      | "      | "                              | April                    | Masonville                        | Disappeared.   |
|   |            | 1963 | 0                       | "      | "                              | "                        | "                                 | Occasionally ranchers report seeing 1 or 2 birds. No reproduction noted. |
| French<br>red-legged<br>partridge<br>( <u>Alectoris</u><br><u>rufa rufa</u> )       | California | 1963 | 342                     | "      | "                              | February                 | Pomponia Canyon,<br>San Mateo Co. | 6 broods observed by residents of the area.                              |
|   | Oklahoma   | 1961 | 98                      | "      | direct                         | October                  | Kiowa County                      | Excellent survival. No broods found.                                     |
|   |            | 1962 | 196                     | "      | "                              | March                    | " "                               | Dispersion 3 miles.  |
|   |            | 1963 | 50                      | "      | "                              | "                        | " "                               | Few observations. One brood reported, but not confirmed.                 |
|   | Texas      | 1961 | 304                     | "      | "                              | Apr-June                 | Lamar County                      | Birds tame. Several broods reported.                                     |
|   |            | 1962 | 400                     | "      | "                              | March                    | " "                               | 2 to 3 broods reported.  |
|   |            | 1963 | 0                       | "      | "                              | "                        | " "                               | Dispersion 10 miles.   |
|   |            |      | 244                     | "      | "                              | May                      | Lavaca County                     | 1 brood of 6 seen.   |
|   |            |      | 301                     | "      | "                              | July                     | " "                               | Good survival. 3 broods observed.  |
|   |            |      | 260                     | "      | "                              | August                   | " "                               | "  |
|   |            |      | 31                      | "      | "                              | "                        | Fayette County                    | Dispersion up to 4 miles.  |

# FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species  | State      | Year | Number<br>Re-<br>leased | Source        | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area                                   | Results to Date   |
|--|------------|------|-------------------------|---------------|--------------------------------|--------------------------|--|---|
| French<br>red-legged<br>partridge<br>(cont'd.)   | Washington | 1961 | 809                     | farm          | direct                         | Mar-June                 | Three Counties                         | Birds and few broods seen.  |
|  |            | 1962 | 2295                    | "             | "                              | Mar-Apr                  | Twelve Counties                        | Birds and broods seen in 3<br>counties. Many birds reported<br>from Yakima Co. See FGIP<br>report #12 for details.  |
|  |            | 1963 | 280                     | "             | "                              | Apr-June                 | Adams County                           | These releases all follow-up<br>plants on original release sites.   |
|  |            |      | 280                     | "             | "                              | " "                      | Challam County                         |   |
|  |            |      | 560                     | "             | "                              | " "                      | Clark County                           |   |
|  |            |      | 80                      | "             | "                              | June                     | Columbia County                        |   |
|  |            |      | 260                     | "             | "                              | Apr-June                 | Island County                          | Several broods observed in<br>spring, but too early to make<br>a definite prediction  |
|  |            |      | 371                     | "             | "                              | " "                      | San Juan County                        |   |
|  |            |      | 500                     | "             | "                              | April                    | Walla Walla County                     |   |
|  |            |      | 816                     | "             | "                              | Apr-June                 | Yakima County                          | Eastern Washington looks better<br>than Western Washington  |
| Turkish<br>chukar<br>partridge<br>( <u>Alectoris</u><br><u>graeca</u><br><u>cypriotis</u><br>or<br><u>kurdistanica</u> ) | California | 1960 | 200                     | "             | gentle                         | January                  | Camp Pendleton,                        | Few observations made of<br>Camp Pendleton or Kenedy Tables<br>releases and contact lost 3 mos.<br>following each release in<br>Little Rock Canyon.<br>Ranchers occasionally hear and<br>see birds at Kenedy Tables;<br>hunters and fishermen at Little<br>Rock Canyon. |
|  |            |      | 240                     | (N.Mex.stock) | "                              | March                    | San Diego County                       |   |
|  |            |      | 200                     | "             | "                              | January                  | Kenedy Tables,                         |   |
|  |            |      | 244                     | "             | "                              | March                    | Madera County                          |   |
|  |            |      | 200                     | "             | "                              | January                  | Little Rock Canyon                     |   |
|  |            |      | 240                     | "             | "                              | March                    | Los Angeles Co.                        |   |
|  |            |      | 200                     | "             | "                              | January                  | San Ardo,                              |   |
|  |            |      | 240                     | "             | "                              | March                    | Monterey County                        |   |
|  |            |      | 423                     | "             | "                              | March                    | Montague, Siskiyou Co.                 |   |
|  |            | 1961 | 100                     | "             | "                              | January                  | Camp Pendleton,                        |   |
|  |            |      |                         |               |                                |                          | San Diego County                       |   |
|  |            |      | 100                     | "             | "                              | "                        | Kenedy Tables,                         |   |
|  |            |      | 100                     | "             | "                              | "                        | Madera County                          |   |
|  |            |      | 100                     | "             | "                              | "                        | Little Rock Canyon,<br>Los Angeles Co. |   |
|  |            |      | 100                     | "             | "                              | "                        | San Ardo, Monterey Co.                 |   |
|  |            |      | 100                     | "             | "                              | March                    | Montague, Siskiyou Co.                 |   |

FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species                                     | State                   | Year | Number<br>Re-<br>leased | Source                | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area  | Results to Date   |
|---|-------------------------|------|-------------------------|-----------------------|--------------------------------|--------------------------|---|---|
| Turkish<br>chukar<br>partridge<br>(cont'd.) | California<br>(cont'd.) | 1962 | 125                     | farm<br>(N.Mex.stock) | gentle                         | January                  | Camp Pendleton,<br>San Diego County             | Carry over from all releases<br>seen at San Ardo and at Montague<br>in 1963. Broods observed each<br>year on both areas. A small pop-<br>ulation is becoming established<br>on San Ardo; the Montague area<br>shows promise. At Gilroy birds<br>were seen in August, one brood<br>was reported. Broods have been<br>reported at Upper Panoche and<br>at Wilbur Springs, none on<br>Freeborn Mountain where the<br>birds are well scattered.<br>More releases are planned for<br>Upper Panoche, Freeborn Moun-<br>tain and Wilbur Springs. |
|   |                         |      | 120                     | "                     | "                              | "                        | Kenedy Tables,<br>Madera County                 |   |
|   |                         |      | 120                     | "                     | "                              | "                        | Little Rock Canyon,<br>Los Angeles County       |   |
|   |                         |      | 130                     | "                     | "                              | "                        | San Ardo, Monterey<br>County                    |   |
|   |                         |      | 125                     | "                     | "                              | March                    | Montague, Siskiyou<br>County                    |   |
|   |                         | 1963 | 299                     | "                     | "                              | January                  | San Ardo, Monterey<br>County                    |   |
|   |                         |      | 294                     | "                     | "                              | March                    | Montague, Siskiyou<br>County                    |   |
|   |                         |      | 150                     | "                     | "                              | January                  | Gilroy, Santa<br>Clara County                   |   |
|   |                         |      | 400                     | "                     | "                              | "                        | Upper Panoche Creek,<br>San Benito County       |   |
|   |                         |      | 400                     | "                     | "                              | "                        | Freeborn Mountain<br>San Louis Obispo<br>County |   |
|   |                         |      | 350                     | "                     | "                              | February                 | Wilbur Springs,<br>Coluse County                |   |

# FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species  | State      | Year | Number<br>Re-<br>leased | Source       | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area  | Results to Date   |
|--|------------|------|-------------------------|--------------|--------------------------------|--------------------------|---|---|
| Turkish<br>chukar<br>partridge<br>(cont'd.)    | Hawaii     | 1961 | 64                      | farm         | gentle                         | August                   | Maui  | Broods noted in May to July on several areas. Moved into low-land dry canyons. Birds dispersed rapidly. |
|  |            |      | 72                      | (New Mexico) | "                              | "                        | Lanai                                       |   |
|  |            |      | 72                      | "            | "                              | "                        | Molokai                                     |   |
|  |            |      | 48                      | "            | "                              | "                        | Oahu  |   |
|  |            |      | 48                      | "            | "                              | "                        | Kauai                                       |   |
|  |            | 1963 | 0                       |              |                                |                          |   | No reports received.  |
|  | New Mexico | 1960 | 1792                    | farm         | direct                         | All                      | Throughout most                             | Broods reported in some areas but no substantial reproduction recorded. See FGIP report #12 for details |
|  |            | 1961 | 4338                    | "            | "                              | Seasons                  | of State in                                 |   |
|  |            | 1962 | 5232                    | "            | "                              |                          | apparently suit-<br>able cover.             |   |
|  |            | 1963 | 200                     | "            | "                              | March                    | Rio Grande Canyon<br>Taos County            | Fair reproduction, results encouraging  |
|  |            |      | 650                     | "            | "                              | "                        | LaPlata and Animas<br>Valleys, San Juan Co. | "   |
| Barbary<br>partridge<br>(Alectoris<br>barbara) | California | 1958 | 152                     | "            | "                              | January                  | Yokohl Valley,<br>Tulare County             | Very few sightings by Department personnel or residents of the area. No reproduction                    |
|  |            |      | 131                     | "            | "                              | "                        | "   |   |
|  |            |      | 135                     | "            | "                              | "                        | Academy, Fresno Co.                         |   |
|  |            |      | 174                     | "            | "                              | February                 | Yokohl Valley,<br>Tulare County             |   |
|  |            | 1960 | 200                     | "            | "                              | "                        | Academy, Fresno Co.                         |   |
|  |            |      | 200                     | "            | "                              | November                 | "   |   |
|  |            |      | 200                     | "            | "                              | "                        | Copperopolis,<br>Calaveras County           |   |
|  |            |      | 200                     | "            | "                              | "                        | "   |   |

FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species   | State                   | Year | Number<br>Re-<br>leased | Source | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area  | Results to Date  |
|---|-------------------------|------|-------------------------|--------|--------------------------------|--------------------------|---|--|
| Barbary<br>partridge<br>(cont'd.)                                     | California<br>(cont'd.) | 1962 | 570                     | farm   | direct                         | January                  | 190 each to Lan-<br>caster, Los Angeles<br>Co., Winchester,<br>Riverside Co.; San<br>Felipe Valley,<br>San Diego County | All birds lost sight of within<br>3-6 months following release.<br>Releases discontinued in 1963<br>because of drought conditions. |
|   |                         |      | 194                     | "      | "                              | -                        | Topo Valley, Monterey<br>County   | Few birds seen in Topo Valley<br>a year following release.   |
|   |                         |      | 200                     | "      | "                              | January                  | Copperopolis,<br>Calaveras County   | Birds disappeared from Copper-<br>opolis a month after release.  |
|   |                         | 1963 | 350                     | "      | "                              | -                        | Topo Valley, Monterey<br>County   | Thirty birds were reported<br>20 miles from the release site<br>following the 1963 release.  |
|   |                         |      | 300                     | "      | "                              | February                 | Copperopolis,<br>Calaveras County   |  |
|   |                         |      | 227                     | "      | "                              | "                        | San Benito River,<br>San Benito County  | First brood of this species<br>observed by Department per-<br>sonnel at San Benito River   |
|   | Hawaii                  | 1960 | 64                      | "      | "                              | July                     | Maui  | No broods seen but reports<br>of coveys and pairs on Maui,<br>Lanai, Molokai indicate some,<br>possibly marginal,<br>survival.     |
|   |                         |      | 77                      | "      | "                              | Jan-July                 | Lanai   |  |
|   |                         |      | 68                      | "      | "                              | July                     | Molokai   |  |
|   |                         | 1961 | 112                     | "      | "                              | Feb-Oct                  | Maui  |  |
| Seesee<br>partridge<br>( <u>Ammoperdix</u><br><u>grisgeogularis</u> ) | Oklahoma                | 1962 | 24                      | "      | "                              | March                    | Kiowa County  | Pairs seen regularly during<br>June but no broods reported.  |
|   |                         | 1963 | 41                      | "      | "                              | "                        | " "   | No records of reproduction.<br>No mortality reports. Dispersal<br>up to 1½ miles from release site.                                |

# FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species  | State            | Year | Number<br>Re-<br>leased | Source | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area                       | Results to Date   |
|--|------------------|------|-------------------------|--------|--------------------------------|--------------------------|----------------------------|---|
| Common<br>Indian<br>sandgrouse<br>( <u>Pterocles</u><br><u>exustus</u><br><u>hindustan</u> ) | Hawaii           | 1961 | 140                     | wild   | gentle                         | March                    | Hawaii                     | Pohakuloa (Hawaii 1962) release   |
|  |                  | 1961 | 137                     | "      | "                              | "                        | Molokai                    | most successful to date   |
|  |                  | 1961 | 118                     | "      | "                              | "                        | Kauai                      | Dispersion 15 miles. Kauai and  |
|  |                  | 1962 | 401                     | "      | "                              | Mar-May                  | Hawaii                     | Molokai results doubtful.   |
|  |                  | 1963 | 0                       | -      | -                              | -                        | -                          | No reports. It appears doubt-<br>ful that species will establish.   |
|  | Nevada           | 1960 | 400                     | "      | direct                         | spring                   | Pahranagat Valley          | Moved southward following cold<br>October rains.  |
|  |                  | 1961 | 1048                    | "      | "                              | "                        | Moapa and Virgin<br>Valley | Most birds left area by Jan.1962.<br>Dispersion rapid. Few birds<br>overwintered on area.                                       |
|  |                  | 1961 | 600                     | "      | "                              | "                        | Pahrump Valley             | Two banded birds recovered 800<br>miles south at Navajoa,<br>Sonora, Mexico.  |
|  |                  | 1963 | 0                       |        |                                |                          |                            | No birds reported.  |
| Red<br>Junglefowl<br>( <u>Gallus</u><br><u>gallus</u><br><u>murghi</u> )                     | Alabama          | 1962 | 23                      | farm   | "                              | March                    | Baldwin County             | Surplus males. Birds tame.  |
|  |                  | 1963 | 17                      | "      | "                              | April                    | Greene County              | Some being seen.  |
|  |                  |      | 38                      | "      | "                              | August                   | " "                        |   |
|  | Georgia          | 1963 | 57                      | "      | "                              | Sept.                    | Decatur County             | Too soon to tell.   |
|  |                  |      | 48                      | "      | "                              | "                        | Clark Hill G.M.A.          | Too soon to tell.   |
|  | Florida<br>(EAB) | 1963 | 92                      | "      | "                              | Oct-Dec                  | Eglin A.F. Base            | Too soon to tell.   |
|  | Oklahoma         | 1961 | 20                      | "      | "                              | Sept.                    | Stringtown G.M.A.          | Good survival. Little dispersion.<br>Very wary. Difficult to locate.<br>Only 8 females in all liberated.<br>One nest broken up. |
|  |                  | 1962 | 28                      | "      | "                              | February                 | Stringtown G.M.A.          |   |

FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species  | State                 | Year | Number<br>Re-<br>leased | Source | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area  | Results to Date   |
|--|-----------------------|------|-------------------------|--------|--------------------------------|--------------------------|---|---|
| Red<br>Junglefowl<br>(cont'd.)   | Oklahoma<br>(cont'd.) | 1963 | 50                      | farm   | direct                         | February                 | Pear Creek,<br>McCurtain Co.                            | Mortality appeared high<br>immediately after release<br>Birds moved into thick black-<br>jack post oak type. No reports<br>of broods. Birds wild and<br>difficult to observe. |
|  |                       |      | 165                     | "      | "                              | "                        | Little River<br>McCurtain Co.                           |   |
|  |                       |      | 57                      | "      | "                              | Mar-June                 | Cookson Refuge,<br>Blackberry Is-<br>land at Grand Lake |   |
| Western<br>Iranian<br>pheasant<br>(pure strain)<br>( <u>Phasianus</u><br><u>colchicus</u><br><u>talischensis</u> ) | Florida               | 1962 | 85                      | "      | gentle                         | February                 | Raiford, Union Co.                                      | Four flocks; three mile movement.<br>Birds still seen in area.  |
|  |                       | 1963 | 0                       | -      | -                              | -                        | -   |   |
|  | Kentucky              | 1962 | 18                      | "      | direct                         | April                    | Henderson County  | Mixed with western Iranian-<br>ringneck crosses on same area.<br>Results very encouraging.  |
|  |                       | 1963 | 276                     | "      | "                              | Apr-Oct.                 | " "   |   |
|  | Oklahoma              | 1962 | 147                     | "      | "                              | March                    | Arkansas River<br>Valley                                | Breeding signs observed.  |
|  |                       |      | 164                     | "      | "                              | March                    | Ft. Gibson G.M.A.                                       | Breeding signs observed.  |
|  | Virginia              | 1961 | 296                     | "      | gentle                         | Apr-Oct.                 | New Kent County   | Favorable. Reproduction evident<br>and a good number of birds seen.<br>Favorable reports on reproduction  |
|  |                       | 1962 | 67                      | "      | "                              | April                    | New Kent County   |   |
|  |                       | 1963 | 458                     | "      | direct                         | Apr-Sept.                | King William Co.  |   |
| Western<br>Iranian<br>ringneck<br>cross  | Alabama               | 1960 | 35                      | "      | "                              | November                 | Limestone County  | Good.   |
|  |                       | 1961 | 42                      | "      | "                              | January                  | " "   | Good.   |
|  |                       | 1962 | 37                      | "      | "                              | "                        | " "   | Good.   |
|  |                       | 1963 | 532                     | "      | "                              | Apr, July,<br>Aug, Sept  | " "   | Good. Birds seen consistently.  |

FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species  | State    | Year | Number<br>Re-<br>leased | Source    | Direct<br>or Gentle<br>Release | Month<br>or Re-<br>lease | Area                            | Results to Date  |
|--|----------|------|-------------------------|-----------|--------------------------------|--------------------------|---------------------------------|--|
| Western<br>Iranian<br>ringneck<br>cross<br>(cont'd.) | Arkansas | 1962 | 44                      | farm      | direct                         | March                    | -                               | Two broods seen on Rainey  |
|  |          |      | 44                      | "         | "                              | "                        | -                               | Brakes area; four pair adults  |
|  |          |      | 100                     | "         | "                              | "                        | -                               | noted on Wattensaw area.   |
|  |          | 1963 | 24                      | "         | "                              | Mar, Aug                 | Brandywine Island               | Some adults, no young seen.  |
|  |          |      | 48                      | "         | "                              | " "                      | Mariana                         | One brood seen.  |
|  |          |      | 48                      | "         | "                              | " "                      | Wattensaw G.M.A.                | Adults and 3 broods observed.  |
|  | Florida  | 1963 | 76                      | "         | "                              | " "                      | Rainey Brakes G.M.A.            | Nine young seen Aug. 1963.   |
|  |          |      | 40                      | farm(Va.) | gentle                         | February                 | Experimental<br>Grasslands farm | Disappeared.   |
|  |          |      | 14                      | " "       | "                              | "                        | " " "                           | Disappeared.   |
|  |          |      | 25                      | " "       | "                              | "                        | Jim Woodruff G.M.A.             | Good survival. Some reproduction.  |
|  | Iowa     | 1962 | 85                      | " "       | "                              | "                        | Jim Woodruff G.M.A.             | Two broods of seven and eight<br>observed. Dispersion 8 miles.   |
|  |          |      | -                       |           |                                |                          |                                 | Birds still seen on area,<br>reproduction.   |
|  |          |      |                         |           |                                |                          |                                 |  |
|  |          |      |                         |           |                                |                          |                                 |  |
|  | Georgia  | 1963 | 212                     | " "       | direct                         | Sept.                    | SW Gordon County                | Too soon to tell.  |
|  | Kentucky | 1962 | 155                     | farm      | "                              | Apr, July,<br>Oct.       | Henry County                    | Intermixed with ringnecks and<br>Eastern Iranian, pure and<br>cross stocked the same time.   |
|  |          | 1963 | 0                       |           |                                |                          |                                 | Many broods sighted from these<br>releases.  |
|  | Kentucky | 1961 | 258                     | "         | "                              | summer                   | Henderson County                | Dispersed up to 4 miles.   |
|  |          | 1962 | 432                     | "         | "                              | Apr-Oct.                 | " "                             | Two nests, 36 broods reported.   |
|  |          | 1963 | 593                     | "         | "                              | October                  | " "                             | Dispersal up to 19 miles.<br>Results currently encouraging.<br>57 broods recorded during 1963<br>Expanding release area in this<br>county. |



FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species  | State   | Year | Number<br>Re-<br>leased | Source    | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area  | Results to Date  |
|--|---|------|-------------------------|-----------|--------------------------------|--------------------------|---|--|
| Western<br>Iranian<br>ringneck<br>cross<br>(cont'd.) | Missouri                                      | 1959 | 884                     | farm      | gentle                         | Sept-Nov.                | Chillicothe                                   | 11 broods reported in 1959.  |
|  |   | 1961 | -                       | "         | "                              | Feb-Apr                  | "   | 46 broods reported in 1960.  |
|  |   | 1962 | 0                       |           |                                |                          |   | 34 broods reported in 1961.  |
|  |   | 1963 | 0                       |           |                                |                          |   | 16 broods reported in 1962.  |
|  | Crowing cock indices substantiate this trend. |      |                         |           |                                |                          |   |  |
|  | South<br>Carolina                             | 1961 | 154                     | farm(Va.) | direct                         | Apr-Dec                  | Eutaw Springs                                 | Many birds and seven to eight broods reported summer 1961.   |
|  |   | 1962 | 47 <sup>±</sup>         | " "       | "                              | summer                   | York County                                   | Less birds and broods 1962.  |
|  |   | 1963 | 123                     | " "       | "                              | Mar-Oct                  | Eutaw Springs                                 | Not reported.  |
|  | Tennessee                                     | 1961 | 573                     | farm      | "                              | -                        | Henry County                                  | Broods and adults reported.  |
|  |   | 1962 | 648                     | "         | "                              | Aug-Oct                  | Lauderdale Co.                                | Slight year to year decrease.  |
|  |   |      | 961                     | "         | "                              | " "                      | Sequatchie Co.                                | Broods seen on all areas.  |
|  |   |      | 694                     | "         | "                              | " "                      | Henry County                                  | Spring crowing counts taken.   |
|  |   | 1963 | 1667                    | "         | "                              | Aug-Sept                 | Lauderdale Co.,<br>Franklin Co.,<br>Henry Co. | Spring crowing counts taken.   |
|  |   |      |                         |           |                                |                          |   | Broods seen on all areas;  |
| Virginia   | Virginia                                      | 1959 | 1972                    | "         | either                         | Apr-Oct                  | Charles City, Surry,                          | Sequatchie Co. reports encouraging results; crowing count and flush count surveys continued; follow-up of releases not completed on all areas. |
|  |   | 1960 | 1633                    | "         | direct                         | " "                      | Prince George, Rich-                          | Birds established and building up to large populations on several release areas.   |
|  |   | 1961 | 1240                    | "         | either                         | " "                      | mond, Campbell, Cos.                          | 1963-Overpopulation of pheasants on several release areas.   |
|  |   | 1962 | 302                     | "         | "                              | April                    |   | Very favorable early results.  |
|  |   | 1963 | 490                     | "         | direct                         | Apr-Aug                  | Campbell and<br>Greensville Cos.              | Good reproduction noted.   |
|  |   |      |                         |           |                                |                          |   |  |

# FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species       | State    | Year | Number<br>Re-<br>leased | Source     | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area              | Results to Date                 |
|---------------|----------|------|-------------------------|------------|--------------------------------|--------------------------|-------------------|---------------------------------|
| Eastern       | Iowa     | 1962 | 45                      | farm       | direct                         | Apr-July                 | Henry County      | Intermixed with other strains.  |
| Iranian       |          | 1963 | 0                       |            |                                |                          |                   | Many broods seen in 1963.       |
| pheasant      |          |      |                         |            |                                |                          |                   |                                 |
| (pure strain) | Kentucky | 1962 | 20                      | "          | "                              | " "                      | Christian County  | Crosses also released on this   |
| (Phasianus    |          |      | 120                     | "          | "                              | October                  | " "               | area.                           |
| colchicus     |          | 1963 | 191                     | "          | "                              | "                        | " "               | Few birds reported.             |
| persicus)     |          |      |                         |            |                                |                          |                   |                                 |
|               | Maryland | 1962 | 41                      | "          | "                              | March                    | Wicomico County   | Birds and reproduction noted.   |
|               | Missouri | 1960 | 83                      | "          | gentle                         | "                        | Rich Hill         | Three broods reported in 1961.  |
|               |          | 1962 | 51                      | "          | "                              | Mar-Apr                  | Rich Hill         | Too early to determine results. |
|               |          |      |                         |            |                                |                          |                   | 11 broods in 1962. Crowing      |
|               |          |      |                         |            |                                |                          |                   | count indices low.              |
|               |          | 1963 | 132                     | "          | "                              | " "                      | Rich Hill         | Five broods reported in 1963;   |
|               |          |      |                         |            |                                |                          |                   | crowing cock index showed       |
|               |          |      |                         |            |                                |                          |                   | substantial increase.           |
|               | Virginia | 1961 | 534                     | "          | "                              | Apr-Sept                 | Orange County     | Good numbers of birds observed. |
|               |          | 1962 | 458                     | "          | either                         | April                    | " "               | Reproduction excellent.         |
|               |          | 1963 | 882                     | "          | direct                         | Apr-Aug,                 | Cumberland County | Evidence of reproduction.       |
|               |          |      |                         |            |                                | Sept.                    |                   |                                 |
| Eastern       | Arkansas | 1961 | 76                      | farm (Mo.) | "                              | April                    | Rainey Brakes     | Birds dispersed but several     |
| Iranian       |          |      | 12                      | " "        | "                              | "                        | Marianna          | broods reported.                |
| ringneck      |          |      | 12                      | " "        | "                              | "                        | Wattensaw G.M.A.  | Two broods reported but no      |
| cross         |          |      |                         |            |                                |                          |                   | birds seen after Oct. 1961.     |
|               | Iowa     | 1962 | 90                      | farm       | "                              | Sept.                    | Henry County      | Too early to tell.              |
|               |          | 1963 | 110                     | "          | "                              | Jun-Oct                  | " "               | Intermixed with other strains   |
|               |          |      |                         |            |                                |                          |                   | released at same time.          |
|               |          |      |                         |            |                                |                          |                   | Many broods seen.               |

FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species  | State    | Year  | Number<br>Re-<br>leased | Source | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area                               | Results to Date  |
|--|----------|-------|-------------------------|--------|--------------------------------|--------------------------|------------------------------------|--|
| Eastern<br>Iranian<br>ringneck<br>cross<br>(cont'd.) | Kentucky | 1961  | 104                     | farm   | direct                         | summer                   | Christian County                   | Dispersed.   |
|  |          | 1962  | 300                     | "      | "                              | Apr-Oct                  | " "                                | One nest, 10 broods reported.  |
|  |          | 1963  | 296                     | "      | "                              | Sept-Nov                 | " "                                | Dispersed up to 12 miles.<br>Eight broods, 1 nest recorded.<br>Not optimistic                                    |
|  | Maryland | 1961  | 9                       | "      | "                              | March                    | Girdletree County                  | Poor.  |
|  |          |       | 62                      | "      | "                              | "                        | Worcester County                   | Good.  |
|  |          |       | 58                      | "      | "                              | Sept.                    | Harford County                     | Surplus cocks only.  |
|  |          |       | 26                      | "      | "                              | Apr-Oct                  | Cecil County                       | Surplus cocks.   |
|  |          |       | 37                      | "      | "                              | October                  | Baltimore County                   | Surplus cocks.   |
|  |          | 1962  | 95                      | "      | "                              | March                    | Worcester County                   | Good.  |
|  |          |       | 80                      | "      | "                              | "                        | Somerset County                    | Good.  |
|  |          |       | 81                      | "      | "                              | "                        | Dorchester County                  | Good.  |
|  |          |       | 42                      | "      | "                              | "                        | Wicomico County                    | Good.  |
|  |          | 1963  | 253                     | "      | gentle                         | "                        | 5 Counties, lower<br>Eastern Shore | Poor.  |
|  | Missouri | 1959- | 1633                    | "      | "                              | fall                     | Centralia                          | 29 broods reported in 1960.  |
|  |          | 1961  |                         | "      | "                              | Feb-Apr                  | "                                  | 45 broods reported in 1961.  |
|  |          | 1963  | 0                       |        |                                |                          |                                    | 49 broods reported in 1962.<br>26 broods reported in 1963.<br>Crowing cock indices substan-<br>tiate this trend. |
|  | Oklahoma | 1963  | 73                      | "      | direct                         | February                 | Fort Gibson G.M.A.                 | Good survival; 7 broods reported.  |
|  |          |       | 67                      | "      | "                              | "                        | Osage, Pawnee Cos.                 | Not reported.  |

FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species  | State     | Year | Number<br>Re-<br>leased | Source | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area   | Results to Date  |
|--|-----------|------|-------------------------|--------|--------------------------------|--------------------------|--|--|
| Eastern<br>Iranian<br>ringneck<br>cross<br>(cont'd.) | Tennessee | 1960 | 5393                    | farm   | direct                         | Sept-Nov                 | Monroe, Cumberland,<br>Benton, Roane,<br>Cheatham, Coffee,<br>Counties | Broods observed on all areas.<br>Results encouraging in Monroe,<br>Cheatham and Coffee Counties  |
|  |           | 1961 | 5785                    | "      | "                              | Aug-Oct                  | Monroe, Benton, Roane,<br>Cheatham, Coffee,<br>Meigs and Grainger Cos. | Same as above.   |
|  |           | 1962 | 894                     | "      | "                              | " "                      | Lawrence County  | Too early to determine.  |
|  |           |      | 1899                    | "      | "                              | " "                      | Greene County  | Too early to determine.  |
|  |           |      | 1144                    | "      | "                              | " "                      | Meigs County   | Too early to determine.  |
|  |           | 1963 | 535                     | "      | "                              | Aug-Sept                 | Lawrence County  | Scattered broods reported from<br>all areas; best reproduction<br>in Meigs Co.; slight to steady<br>decrease in population appar-<br>ent on all areas. |
|  | Virginia  | 1959 | 1310                    | "      | either                         | Oct-Apr                  | Halifax, Campbell,   | Low reproduction and general<br>decline in population.   |
|  |           | 1960 | 999                     | "      | direct                         | " "                      | Charlotte, King,   |  |
|  |           | 1961 | 1287                    | "      | either                         | " "                      | George, Fluvanna,  |  |
|  |           | 1962 | 514                     | "      | "                              | April                    | Nelson and Cumber-<br>land Counties                                    | Some reports on reproduction.<br>Not outstanding. Group dis-<br>continued after this season.   |
|  |           | 1963 | 927                     | "      | direct                         | Apr-Aug,<br>Sept.        | Page County  |  |
| Eastern,<br>Western<br>Iranian<br>ringneck<br>cross  | Ohio      | 1960 | 936                     | "      | "                              | Oct-Mar                  | S.E., S. and S.W.<br>Ohio  | Some reproduction but no<br>evidence of establishment.   |
|  |           | 1961 | 849                     | "      | "                              | July-Nov                 | S.W. Ohio  |  |
|  |           | 1962 | 478                     | "      | "                              | November                 | S.E., S. Ohio  |  |
|  | Virginia  | 1959 | 333                     | "      | "                              | October                  | Camp Pickett   | Not known.   |
|  |           | 1960 | 137                     | "      | "                              | "                        | Cumberland County  | Not known.   |
|  |           | 1962 | 47                      | "      | "                              | "                        | " "  | Not known.   |
|  |           | 1963 | 0                       |        |                                |                          |  | Result of releases not known.  |

FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species   | State        | Year | Number<br>Re-<br>leased | Source    | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area                                   | Results to Date   |
|---|--------------|------|-------------------------|-----------|--------------------------------|--------------------------|--|---|
| Japanese<br>green<br>pheasant<br>(pure strain)<br>( <u>Phasianus</u><br><u>colchicus</u><br><u>robustipes</u> ) | Alabama      | 1962 | 34                      | farm      | direct                         | January                  | Autauga County                         | Too early to tell.  |
|   |              | 1963 | 0                       |           |                                |                          |  | No birds reported.  |
|   | Georgia      | 1963 | 238                     | farm(Va.) | "                              | Sept.                    | NE Gordon Co.                          | Too early to tell.  |
|   | Illinois     | 1963 | 77                      | farm      | "                              | October                  | Neogo                                  | Too early to determine.   |
|   | Ohio         | 1960 | 200                     | "         | "                              | November                 | SE and S Ohio                          | No evidence of survival.  |
|   | Tennessee    | 1962 | 860                     | "         | "                              | Aug-Oct                  | Jefferson County                       | Too early to determine.   |
|   |              | 1963 | 965                     | "         | "                              | Sept.                    | Dyer County,<br>Jefferson County       | Reproduction believed fair;<br>follow-up releases not completed       |
|   | Virginia     | 1960 | 204                     | "         | either                         | October                  | Accomac-North-                         | Encouraging. Many adults and  |
|   |              | 1961 | 621                     | "         | "                              | Apr-Oct.                 | ampton Counties                        | young observwd.   |
|   |              | 1962 | 301                     | "         | "                              | April                    | Northampton County                     |   |
|   |              | 1963 | 1129                    | "         | direct                         | Apr-Aug-<br>Sept.        | Northumberland and<br>Nansemond County | Mostly fall '63 releases. Reports<br>from earlier releases favorable. |
| Japanese<br>green<br>ringneck<br>cross  | Tennessee    | 1962 | 1349                    | "         | "                              | Aug-Oct.                 | Henderson County                       | Too early to tell.  |
|   |              | 1963 | 1236                    | "         | "                              | Aug-Sept.                | " "                                    | Reproduction believed good<br>to fair.                                |
| Korean<br>ringneck<br>pheasant<br>( <u>Phasianus</u><br><u>colchicus</u><br><u>karpowi</u> )                    | Missouri     | 1962 | 305                     | "         | gentle                         | spring                   | Bernie (Bootheel)                      | 66 broods reported in 1963.   |
|   |              | 1963 | 0                       |           |                                |                          |  | Crowing index high.   |
|   | Pennsylvania | 1962 | 234                     | "         | "                              | March                    | Ray's Cove,<br>Bedford County          | Surplus game farm stock, 3/4 males.<br>10 males shot in open season.  |
|   |              | 1963 | 546                     | "         | "                              | "                        | Bedford, Erie and<br>Crawford Counties | Some reproduction noted.  |

FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species   | State         | Year | Number<br>Re-<br>leased | Source | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area                                     | Results to Date  |
|---|---------------|------|-------------------------|--------|--------------------------------|--------------------------|--|--|
| Afghan<br>white-<br>winged<br>pheasant<br>( <u>Phasianus</u><br><u>colchicus</u><br><u>bianchii</u> ) | New<br>Mexico | 1961 | 18                      | farm   | gentle                         | February                 | Washington Ranch,<br>Eddy County         | Surplus males only.  |
|   |               |      | 59                      | "      | "                              | November                 | San Juan County                          | Surplus males only.  |
|   |               | 1963 | 400                     | "      | "                              | March                    | Red Rock, Gila Valley<br>Grant County    | Fair reproduction,<br>encouraging  |
|   | Oklahoma      | 1963 | 16                      | "      | "                              | February                 | North Fork of Red<br>River, Greer County | No reproduction recorded.<br>Survival good with no known<br>losses. Dispersion about<br>5 miles. |
|   | Nevada        | 1963 | 48                      | "      | "                              | April                    | Virgin Valley                            | No broods sighted yet. Complete<br>dispersal from release area.                                  |
| Afghan<br>white-<br>winged<br>pheasant<br>ringneck<br>cross   | Oklahoma      | 1961 | 200                     | "      | "                              | Sept.                    | Grant County                             | Winter survival good.  |
|   |               |      | 200                     | "      | "                              | "                        | Canton Lake                              | Not known.   |
|   |               |      | 200                     | "      | "                              | "                        | Dewey County                             | Not known.   |
|   |               |      | 425                     | "      | "                              | February                 | Grant County                             | Two broods reported.<br>Dispersion 12 miles.   |
|   |               | 1962 | 446                     | "      | "                              | "                        | Canton Lake                              | Winter survival good, 2 broods<br>noted. Dispersion 25 miles.                                    |
|   |               |      | 235                     | "      | "                              | "                        | Dewey County                             | Survival good. One brood seen.   |
|   |               |      | 340                     | "      | "                              | "                        | Salt Fork River                          | Reproduction and survival good   |
|   |               |      | 450                     | "      | "                              | "                        | Grant County                             | as compared to fair in past.   |
|   |               |      | 375                     | "      | "                              | "                        | Dewey, Custer,<br>Roger Mills Cos.       | Mortality low. Dispersion<br>10-15 miles in some cases.  |
|   |               |      |                         |        |                                |                          | Canton Lake                              | Cross consisted of 1/4 ringneck<br>3/4 white-winged pheasant blood                               |
| Kalij<br>pheasant<br>( <u>Lophura leucomelana hamiltonii</u> )  | Virginia      | 1963 | 138                     | "      | both                           | April                    | Giles County                             | Not known. Some birds have<br>been seen and one brood<br>reported.                               |

# FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

The following species have been introduced by States, cooperating with the Bureau's Foreign Game Introduction Program, with some or no Federal assistance.

| Species   | State    | Year | Number<br>Re-<br>leased | Source      | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area                                | Results to Date   |
|---|----------|------|-------------------------|-------------|--------------------------------|--------------------------|-------------------------------------|---|
| Reeves<br>pheasant<br>( <i>Syrnaticus</i><br><i>reevesi</i> ) | Arkansas | 1959 | 100                     | farm        | direct                         | -                        | Black Mountain                      | Two broods reported in 1960.<br>Birds dispersed.<br>No birds reported.  |
|   |          | 1960 | 147                     | "           | "                              | -                        | " "                                 |   |
|   |          | 1963 | 0                       |             |                                |                          |                                     |   |
|   | Hawaii   | 1961 | 80                      | farm (Cal.) | gentle                         | Sept-Oct.                | Maui                                | Kauai and Hawaii release hold-<br>ing their own; others doubtful.<br>Broods observed on Kauai and<br>Hawaii. Unbanded adults seen<br>on Hawaii and Molokai.<br>Species holding its own on<br>several of the release areas;<br>but is nowhere indicating<br>establishment. Small broods<br>were reported from Molokai and<br>Oahu; adults from the original<br>releases were seen, in ex-<br>cellent condition on Hawaii<br>and Kauai. |
|   |          |      | 153                     | " "         | "                              | " "                      | Lanai                               |   |
|   |          |      | 121                     | " "         | "                              | " Nov.                   | Oahu                                |   |
|   |          |      | 194                     | " "         | "                              | " "                      | Kauai                               |   |
|   |          | 1963 | 0                       |             |                                |                          |                                     |   |
|   | Iowa     | 1963 | 132                     | farm        | "                              | Jan, June                | Stephens State<br>Forest, S.C. Iowa | The January releases were<br>sighted throughout the winter.<br>Many of the June releases are<br>seen regularly.   |

# FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species  | State    | Year         | Number<br>Re-<br>leased | Source              | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area              | Results to Date  |
|--|----------|--------------|-------------------------|---------------------|--------------------------------|--------------------------|-------------------|--|
| Reeves<br>pheasant<br>(cont'd.)                            | Kentucky | 1959         | 765                     | farm <sup>(1)</sup> | direct                         | fall                     | Two areas         | Only 3 broods reported through 1961. Birds generally tame. For detailed report see FGIP Report #12.                |
|  |          | 1960         | 2301                    | "                   | either                         | "                        | Seven areas       |  |
|  |          | 1961         | 994                     | "                   | direct                         | summer                   | Three areas       |  |
|  |          | 1962         | 2623                    | "                   | "                              | summer-fall              | Five areas        |  |
|  |          | 1963         | 938                     | "                   | "                              | " "                      | Three areas       |  |
|  | Ohio     | 1958-1961    | 21,952                  | "(1)                | either                         | June-Oct.                | Southeastern Ohio | Results not encouraging. No additional releases scheduled. Some reproduction but little evidence of establishment. |
|  |          | 1963         | 0                       |                     |                                |                          |                   |  |
|  |          |              |                         |                     |                                |                          |                   |  |
|  | Virginia | 1960         | 106                     | farm <sup>(1)</sup> | direct                         | October                  | Cumberland Forest | Not known.   |
|  |          | 1961         | 12                      | "                   | "                              | April                    | Cumberland Forest | Not known.   |
|  |          | 1962         | 101                     | "                   | "                              | "                        | Philpot Reservoir | Not known.   |
|  |          | Discontinued |                         |                     |                                |                          |                   | Apparently a failure.  |
| Reeves Ohio<br>ringneck<br>cross                           | Ohio     | 1960         | 260                     | "                   | "                              | Oct-Nov                  | S.E. and S. Ohio  | No evidence of establishment.  |
|  |          | 1961         | 950                     | "                   | "                              | " "                      |                   |  |
| Elliot's<br>pheasant<br>( <i>Syrnaticus<br/>elliotti</i> ) | Ohio     | 1960         | 300                     | "                   | "                              | November                 | S. Ohio           | No evidence of survival.   |
|  |          | 1961         | 950                     | "                   | "                              | "                        | S. Ohio           |  |

- (1) Brood stock was the best obtainable from breeders in the United States but in captivity for many years. Wild-trapped Reeves breeders secured in France by the Foreign Game Introduction Program seldom used because of the time required to develop a strain that would reproduce well in captivity.



FOREIGN GAME INTRODUCTION PROGRAM

Table 1. Summary of Foreign Game Bird Releases and Results - 1960-1963 (continued)

| Species  | State  | Year | Number<br>Re-<br>leased | Source           | Direct<br>or Gentle<br>Release | Month<br>of Re-<br>lease | Area                          | Results to Date   |
|--|--------|------|-------------------------|------------------|--------------------------------|--------------------------|-------------------------------|---|
| Erkel's<br>francolin<br>( <u>Francolinus</u><br><u>erckelii</u><br><u>erckelii</u> ) | Hawaii | 1960 | 353                     | farm (Cal)       | gentle                         | spring to<br>fall        | Seven islands                 | Holding their own on most<br>islands. Breeding February<br>through July. See FGIP report<br>#12 for details.                        |
|  |        | 1961 | 51                      | "                | "                              | November                 | Molokai                       | Twenty-five adults and one<br>brood of 9 seen on Lanai.   |
|  |        | 1962 | 150                     | "                | "                              | Oct-Mar.                 | Three islands                 | Small numbers of birds on most<br>islands but nowhere established   |
|  |        | 1963 | 0                       |                  |                                |                          |                               |   |
| 31<br>Himalayan<br>snowcock<br>( <u>Tetraogallus</u><br><u>himalayensis</u> )        | Nevada | 1963 | 19                      | wild-<br>trapped | direct                         | April                    | Ruby Mountains<br>(near Elko) | Several sight records reported<br>by sheepherders in the vicinity<br>of the release site at Robinson<br>Lake, 9,000 feet elevation. |

FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963

| Species  | State                | Year | Number of<br>breeding<br>hens | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|--|----------------------|------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Black<br>francolin<br>( <u>Francolinus</u><br><u>francolinus</u><br><u>asiae</u> ) | Alabama              | 1961 | 34                            | 1:2           | 401                   | 11.8                  | 168                          | 41.8               | 120                            | 78                           |
|  |                      | 1962 | 44                            | 1:2 - 1:3     | 340                   | 7.7                   | 257                          | 75.6               | 165                            | 63                           |
|  |                      | 1963 | 30                            | 1:3           | 235                   | 7.8                   | 165                          | 70.0               | 132                            | 53                           |
|  | Arkansas             | 1961 | 5                             | 1:1           | 10                    | 2.0                   | 8                            | 80.0               | 7                              | 7                            |
|  |                      | 1962 | 8                             | 1:1           | 184                   | 23.0                  | -                            | -                  | 60 (2)                         | 59                           |
|  |                      | 1963 | 16                            | 1:2           | 247                   | 15.4                  | -                            | -                  | 121                            | 103                          |
|  | Florida<br><br>(EAB) | 1961 | 7 (1)                         | 1:1           | 0                     | 0                     | 0                            | 0                  | 0                              | 0                            |
|  |                      | 1962 | 10 (1)                        | -             | 0                     | 0                     | 0                            | 0                  | 0                              | 0                            |
|  |                      | 1963 | 7                             | 1:3           | 216                   | -                     | -                            | -                  | 135                            | 11                           |
|  |                      | 1962 | 7                             | flock         | 19                    | 2.7                   | -                            | -                  | -                              | 0                            |
|  |                      | 1963 | 7                             | 1:2           | 53                    | 7.6                   | 14                           | 28                 | 14                             | 8                            |
|  | Georgia              | 1960 | 20                            | "             | 63                    | 3.1                   | -                            | -                  | 36                             | 29                           |
|  |                      | 1961 | 20                            | "             | 10                    | 0.5                   | -                            | -                  | 4                              | 2                            |
|  |                      | 1962 | 20                            | 1:2 - 1:4     | 85                    | 4.3                   | 34                           | 40.0               | 34                             | 4                            |
|  |                      | 1963 | 22                            | 1:4           | 61                    | 2.6                   | 32                           | 49.0               | 32                             | 5                            |
|  | Kentucky             | 1961 | 24 (1)                        | flock         | 0                     | 0                     | 0                            | 0                  | 0                              | 0                            |
|  |                      | 1962 | 35                            | 1:3           | 407                   | 11.6                  | 352                          | 86.5               | 315                            | 67                           |
|  |                      | 1963 | 39                            | 2:3           | 341                   | 8.7                   | 227                          | 66.6               | 170                            | 66                           |
|  | Louisiana            | 1963 | 11                            | 1:3<br>1:2    | 27 (3)                | 2.45                  | -                            | -                  | 16                             | 11                           |

- (1) Wild-trapped birds penned this year. These usually do not lay for 1 to 2 years following penning.  
 (2) Eggs hatched by commercial hatchery.  
 (3) Low egg production is believed partly due to fact that breeders were not received on area until 3/29/63.

FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species  | State             | Year | Number of<br>breeding<br>hens | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|--|-------------------|------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Black<br>francolin<br>(cont'd.)  | New Mexico        | 1962 | 35 (1)                        | 1:1           | 0                     | 0                     | 0                            | 0                  | 0                              | 0                            |
|  |                   | 1963 | 34                            | 1:1           | 123                   | 3.6                   | 96                           | 78.0               | 70                             | 37                           |
|  | South<br>Carolina | 1961 | -                             | -             | -                     | -                     | -                            | -                  | -                              | -                            |
|  |                   | 1962 | 30                            | 1:1 - 1:2     | -                     | -                     | -                            | -                  | -                              | -                            |
|  |                   | 1963 | 40                            | -             | -                     | -                     | -                            | -                  | -                              | -                            |
|  | Tennessee         | 1960 | 10 (1)                        | 1:2           | 13                    | 1.3                   | -                            | -                  | 11                             | 5                            |
|  |                   | 1961 | 30                            | 1:2           | 74                    | 2.5                   | -                            | -                  | 41                             | 16                           |
|  |                   | 1962 | 22                            | 1:3           | 186                   | 8.4                   | -                            | -                  | 88                             | 56                           |
|  |                   | 1963 | 33                            | 1:3           | 826                   | 25.0                  | 566                          | 68.5               | 482                            | 207                          |
|  | Utah              | 1961 | 16 (1)                        | 1:1           | 0                     | 0                     | 0                            | 0                  | 0                              | 0                            |
|  |                   | 1962 | 57 (1)                        | 1:1           | 18                    | 0.3                   | 8                            | 44.0               | 6                              | 4                            |
|  |                   | 1963 | 23                            | 1:2           | 38                    | 1.7                   | 16                           | 42.1               | 12                             | 7                            |
|  | Virginia          | 1960 | -                             | 1:1           | 22                    | -                     | -                            | -                  | -                              | 17                           |
|  |                   | 1961 | 17                            | 1:1           | 490                   | 28.9                  | 365                          | 74.5               | 313                            | 245                          |
|  |                   | 1962 | 58                            | 1:1           | 1821                  | 31.4                  | 1480                         | 81.3               | 1184                           | 716                          |
|  |                   | 1963 | 58                            | 1:1           | 1181                  | 20.4                  | 793                          | 67.1               | 642                            | 514                          |
| Gray<br>francolin<br>( <u>Francolinus</u><br><u>pondicerianus</u><br><u>interpositus</u> ) | New Mexico        | 1962 | 35 (1)                        | 1:1           | 84                    | 2.4                   | -                            | -                  | 60                             | 49                           |
|  |                   | 1963 | 50                            | 1:1           | 436                   | 8.7                   | 371                          | 85.1               | 306                            | 265                          |
|  | Oklahoma          | 1960 | 36 (1)                        | 1:1           | 38                    | 6.3                   | 23                           | 60.5               | 14                             | 9                            |
|  |                   | 1961 | 3                             | 1:1           | 26                    | 8.6                   | -                            | -                  | 2                              | 0                            |
|  |                   | 1962 | 3                             | 1:3           | 28                    | 9.3                   | 11                           | 39.3               | 11                             | 3                            |
|  |                   | 1963 | 2                             | 1:2           | 69                    | 34.5                  | 41                           | 60.0               | 24                             | 16                           |

(1) Breeders wild-trapped and first year in pens.

# FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species   | State      | Year | Number of<br>breeding<br>hens | How<br>Panned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|---|------------|------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Gray<br>francolin<br>(cont'd.)  | Texas      | 1960 | 10                            | 1:1           | 71                    | 7.1                   | -                            | -                  | 51                             | 45                           |
|   |            | 1961 | 31                            | 1:1           | 292                   | 9.4                   | -                            | -                  | 157                            | 126                          |
|   |            | 1962 | 80                            | 1:1           | 578                   | 7.2                   | -                            | -                  | 226                            | 204                          |
|   |            | 1963 | 60                            | 1:1           | 2231                  | 37.0                  | 1065                         | 47.7               | 812                            | 778                          |
|   | Utah       | 1961 | 8 (1)                         | 1:1           | 8                     | 1.0                   | -                            | -                  | 6                              | 6                            |
|   |            | 1962 | 44 (1)                        | 1:1           | 44                    | 1.0                   | 13                           | 29.5               | 8                              | 5                            |
|   |            | 1963 | 30                            | 1:2           | 72                    | 2.4                   | 36                           | 50.0               | 24                             | 18                           |
|   | Washington | 1962 | 25 (1)                        | 1:1           | 9                     | 0.4                   | -                            | -                  | 7                              | 5                            |
|   |            | 1963 | 14                            | 1:1           | 7                     | 0.5                   | 6                            | 85.7               | 6                              | 5                            |
| Bamboo<br>partridge<br>( <u>Rambusicola</u><br><u>thoracica</u><br><u>thoracica</u> ) | Alabama    | 1961 | 34                            | 1:2           | 401                   | 11.8                  | 168                          | 41.9               | 120                            | 79                           |
|   |            | 1962 | 51                            | 1:1           | 330                   | 6.5                   | 176                          | 53.3               | 63                             | 62                           |
|   |            | 1963 | 39                            | 1:1           | 563                   | 14.4                  | 234                          | 41.0               | 159                            | 116                          |
|   | Arkansas   | 1961 | 15                            | -             | -                     | -                     | -                            | -                  | -                              | 54                           |
|   |            | 1962 | 35                            | 1:1           | 802                   | 22.9                  | -                            | -                  | 264                            | 222                          |
|   |            | 1963 | 30                            | 1:1           | 735                   | 24.5                  | -                            | -                  | 307                            | 260                          |
|   | Kentucky   | 1960 | -                             | flock         | 80                    | -                     | 44                           | 55.0               | 24                             | 22                           |
|   |            | 1961 | 8                             | "             | 42                    | 5.3                   | 20                           | 47.6               | 15                             | 6                            |
|   |            | 1962 | 8                             | "             | 210                   | 26.3                  | 180                          | 85.7               | 54                             | 6                            |
|   |            | 1963 | 6                             | "             | 97                    | 16.1                  | 79                           | 81.4               | 0                              | 0                            |

(1) Breeders wild-trapped and first year in pens.

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species                          | State      | Year | Number of<br>breeding<br>hens | How<br>Penned        | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|----------------------------------|------------|------|-------------------------------|----------------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Bamboo<br>partridge<br>(cont'd.) | Missouri   | 1960 | 11                            | 1:1                  | 381                   | 34.6                  | 305                          | 80.1               | 208                            | 200                          |
|                                  |            | 1960 | 4                             | flock                | 30                    | 7.5                   | 25                           | 83.3               | -                              | -                            |
|                                  |            | 1961 | 21                            | 1:1                  | 347 (1)               | 14.7                  | 242 (2)                      | 86.1               | 172                            | 143                          |
|                                  |            | 1962 | 14                            | 1:1                  | 399                   |                       | 289 (3)                      | 75.0               | 88 (4)                         | 50                           |
|                                  |            |      | Same Hens                     |                      | 73                    | 33.8                  |                              |                    | 37 (6)                         | 37                           |
|                                  |            | 1962 | 19                            | 1:1 (7)              | 130                   | 6.8                   | 103 †                        | 79.0               | 103 (6)                        | 93                           |
|                                  |            | 1963 | 18                            | 1:1                  | 215                   | 12.0                  | -                            | -                  | 154                            | 105                          |
|                                  | Oregon     | 1960 | 10                            | 1:1                  | 153                   | 15.3                  | 84                           | 54.9               | 71                             | 32                           |
|                                  |            | 1961 | 25                            | 1:1                  | 258                   | 10.3                  | 67                           | 26.0               | 58                             | 25                           |
|                                  |            | 1962 | 69                            | 1:1                  | 617                   | 9.0                   | 265                          | 44.4               | 193                            | 159                          |
|                                  |            | 1963 | 91                            | flock<br>1:1,2:5,2:1 | 523                   | 5.7                   | 236                          | 45.1               | -                              | -                            |
|                                  | Tennessee  | 1960 | 13                            | 1:1                  | 146                   | 11.2                  | -                            | -                  | 52                             | 33                           |
|                                  |            | 1961 | 25                            | 1:1                  | 276                   | 11.0                  | -                            | -                  | 89                             | 59                           |
|                                  |            | 1962 | 54                            | 1:3                  | 742                   | 12.0                  | -                            | -                  | 267                            | 172                          |
|                                  |            | 1963 | 141                           | flock<br>1:3         | 2013                  | 14.3                  | 1167                         | 57.5               | 731                            | 321                          |
|                                  | Washington | 1960 | 19                            | -                    | 7                     | 0.4                   | 6                            | 85.6               | 5                              | 4                            |
|                                  |            | 1961 | -                             | -                    | -                     | -                     | -                            | -                  | -                              | -                            |
|                                  |            | 1962 | 72                            | 1:1                  | 1085                  | 15.1                  | -                            | -                  | 275 ‡                          | 240                          |
|                                  |            | 1963 | 136                           | 1:1                  | 3160                  | 23.2                  | -                            | 33.9               | 936                            | 462                          |

(1) Only 281 eggs set.

(2) Twelve hens incubated 39 late eggs in nests in the pens; of these 35 hatched.

(3) Fertility based on number of eggs set, not on total production.

(4) Incubated artificially.

(5) In line-connected pens.

(6) Eggs were left in the pens to be incubated by the female bamboo partridge.

(7) In isolated pens.

FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species  | State      | Year | Number of<br>breeding<br>hens       | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|--|------------|------|-------------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Spanish<br>red-legged<br>partridges<br>( <u>Alectoris</u><br><u>rufa</u><br><u>hispanica</u> ) | California | 1963 | 47                                  | 1:1           | 420                   | 8.9                   | -                            | 43.7               | 178                            | 123                          |
|  | Colorado   | 1960 | 27                                  | 1:1           | 286                   | 10.6                  | 205                          | 71.7               | 150                            | 68                           |
|  |            | 1961 | 42                                  | 1:1           | 362                   | 8.6                   | 240                          | 66.3               | 68                             | 15                           |
|  |            | 1962 | 38                                  | 1:1           | 33                    | 0.9                   | 27                           | 81.8               | 22                             | 12                           |
|  |            | 1963 | Production tentatively discontinued |               |                       |                       |                              |                    |                                |                              |
|  | Utah       | 1961 | 6                                   | 1:1           | 12                    | 2.0                   | -                            | -                  | -                              | 1                            |
|  |            | 1962 | 5                                   | 1:2           | 16                    | 3.2                   | 6                            | 37.5               | 2                              | 2                            |
|  |            | 1963 | 4                                   | 1:1           | 37                    | 9.2                   | 12                           | 32.4               | 9                              | 3                            |
| 36 French<br>red-legged<br>partridges<br>( <u>Alectoris</u><br><u>rufa</u><br><u>rufa</u> )    | California | 1963 | 283                                 | 1:1           | 2984                  | 10.2                  | -                            | 69.1               | 1834                           | 1536                         |
|  | Kentucky   | 1961 | 5                                   | flock         | 0                     | 0                     | 0                            | 0                  | 0                              | 0                            |
|  |            | 1962 | 4                                   | "             | 51                    | 12.7                  | 38                           | 74.5               | 21                             | 13                           |
|  | Oklahoma   | 1959 | 9                                   | 1:1           | 61                    | 6.8                   | 46                           | 75.4               | 35                             | 19                           |
|  |            | 1960 | 16                                  | 1:1           | 221                   | 13.8                  | 152                          | 68.8               | 119                            | 89                           |
|  |            | 1961 | 78                                  | 1:2           | 968                   | 12.4                  | 681                          | 70.3               | 548                            | 468                          |
|  |            | 1962 | 92                                  | 1:1           | 166                   | 1.8                   | 126                          | 76.0               | 82                             | 57                           |
|  |            | 1963 | 99                                  | 1:1           | 1681                  | 16.9                  | 963                          | 57.3               | 762                            | 582                          |
|  | Texas      | 1960 | 37                                  | 1:1           | 650                   | 17.8                  | -                            | -                  | 357                            | 327                          |
|  |            | 1961 | 58                                  | 1:1           | 1476                  | 25.4                  | -                            | -                  | 739                            | 666                          |
|  |            | 1962 | 125                                 | 1:1           | 1680                  | 13.4                  | -                            | -                  | 835                            | 624                          |
|  |            | 1963 | 54                                  | flock<br>1:1  | 1711                  | 31.0                  | -                            | -                  | 918                            | 842                          |
|  | Washington | 1960 | 102                                 | -             | 1553                  | 15.2                  | -                            | -                  | 1315                           | 972                          |
|  |            | 1961 | 300                                 | -             | -                     | -                     | -                            | -                  | -                              | -                            |
|  |            | 1962 | 355                                 | flock         | 4390                  | 12.4                  | -                            | -                  | 3775                           | 3135                         |
|  |            | 1963 | 397                                 | "             | 4680                  | 11.8                  | -                            | 88.5               | 4066                           | 3673                         |

FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species   | State      | Year     | Number of<br>breeding<br>hens | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|---|------------|----------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Seesee  | Oklahoma   | 1960     | 10                            | 1:2           | 43                    | 4.3                   | 33                           | 76.7               | 28                             | 25                           |
| partridge   |            | 1961     | 11                            | 1:2           | 100                   | 9.1                   | 68                           | 68.0               | 67                             | 65                           |
| ( <u>Ammoperdix</u>                               |            | 1962     | 26                            | 1:1-1:5       | 125                   | 4.8                   | 90                           | 72.0               | 45                             | 45                           |
| <u>grisgeogularis</u> )                           |            | 1963     | 20                            | 1:1           | 151                   | 7.5                   | 111                          | 73.6               | 85                             | 76                           |
|   | Utah       | 1961     | 20                            | 1:1           | 0                     | 0                     | 0                            | 0                  | 0                              | 0                            |
|   |            | 1962     | 8                             | 1:2           | 63                    | 7.9                   | 14                           | 22.2               | 9                              | 1                            |
|   |            | 1963     | 7                             | 1:2           | 109                   | 15.6                  | 41                           | 47.2               | 36                             | 31                           |
| Turkish   | California | 1963     | 67                            | 1:1           | 3705                  | 55.3                  | -                            | -                  | 1978                           | 1547                         |
| chukar  |            |          |                               |               |                       |                       |                              |                    |                                |                              |
| partridge   | New Mexico | 1962 (1) | 70                            | 1:1           | 1818                  | 26.0                  | -                            | -                  | 1550                           | 900 (2)                      |
| ( <u>Alectoris</u>                                |            | 1963     | 12                            | flock         | 213                   | 17.7                  | 188                          | 88.3               | 164                            | 146                          |
| <u>graeca cypriotes</u> and <u>kurdestanica</u> ) |            |          |                               |               |                       |                       |                              |                    |                                |                              |
| Greek chukar                                      | California | 1963     | 28                            | 1:1           | 304                   | 10.8                  | -                            | -                  | 225                            | 183                          |
| partridge   |            |          |                               |               |                       |                       |                              |                    |                                |                              |
| ( <u>Alectoris graeca</u> sp.)                    |            |          |                               |               |                       |                       |                              |                    |                                |                              |
| Barbary   | California | 1963     | 97                            | 1:1           | 2199                  | 21.7                  | -                            | -                  | 1550                           | 1254                         |
| partridge   |            |          | (Game farm stock)             |               |                       |                       |                              |                    |                                |                              |
| ( <u>Alectoris barbara</u> )                      |            |          |                               |               |                       |                       |                              |                    |                                |                              |

(1) Substantial numbers of birds also raised in 1959-1961; record excellent but not reported.

(2) Heavy loss from salmonella infection.

# FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species                           | State         | Year | Number of<br>breeding<br>hens | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|-----------------------------------|---------------|------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Common                            | Utah          | 1961 | 15 (1)                        | 1:1           | 0                     | 0                     | 0                            | 0                  | 0                              | 0                            |
| Indian                            |               | 1962 | 10                            | 1:1-1:2       | 1                     | 0.1                   | 0                            | 0                  | 0                              | 0                            |
| sandgrouse                        |               | 1963 | 9                             | 1:1           | 0                     | 0                     | 0                            | 0                  | 0                              | 0                            |
| (Pterocles exustus hindustan)     |               |      |                               |               |                       |                       |                              |                    |                                |                              |
| Imperial                          | Utah          | 1962 | 6                             | 1:1-1:2       | 0                     | 0                     | 0                            | 0                  | 0                              | 0                            |
| sandgrouse                        |               | 1963 | 5                             | 1:1           | 0                     | 0                     | 0                            | 0                  | 0                              | 0                            |
| (Pterocles orientalis orientalis) |               |      |                               |               |                       |                       |                              |                    |                                |                              |
| Red junglefowl                    | Alabama       | 1961 | 11                            | 1:5           | 151                   | 13.7                  | 109                          | 72.2               | 86                             | 52                           |
| (Gallus                           |               | 1962 | 29                            | 1:2-1:3       | 744                   | 25.7                  | 490                          | 65.9               | 362                            | 60                           |
| gallus                            |               | 1963 | 30                            | 1:3           | 736                   | 24.5                  | 604                          | 82.0               | 523                            | 50                           |
| murghi)                           |               |      |                               |               |                       |                       |                              |                    |                                |                              |
|                                   | Florida (EAB) | 1962 | 7                             | 1:3-1:4       | 295                   | 42.1                  | -                            | -                  | 67                             | 31                           |
|                                   |               | 1963 | 1                             | 1:1           | 17                    | 17.0                  | -                            | -                  | 6                              | 4                            |
|                                   | (EAB) 1963    | 12   |                               | 1:4           | 367                   | 30.4                  | 260                          | 71.4               | 143                            | 143                          |
|                                   | Georgia       | 1961 | 8                             | flock         | 35                    | 4.4                   | -                            | -                  | 28                             | 22                           |
|                                   |               | 1962 | 10                            | 1:4-1:5       | 96                    | 9.6                   | -                            | -                  | 29                             | 25                           |
|                                   |               | 1963 | 20                            | 1:5           | 267                   | 13.7                  | -                            | -                  | 174                            | 126                          |
|                                   | Kentucky      | 1962 | 2 (1)                         | 1:1           | 75                    | 37.5                  | 67                           | 90.5               | 58                             | 25                           |
|                                   |               | 1963 | 20                            | 1:4           | 147                   | 9.4                   | 132                          | 89.7               | 120                            | 114                          |
|                                   | Louisiana     | 1963 | 9                             | 1:3-1:2       | 160                   | 17.8                  | -                            | -                  | 88 (2)                         | 85                           |

(1) First year in captivity.

(2) 24 eggs failed to hatch due to malfunction of incubator.



## FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species  | State          | Year | Number of<br>breeding<br>hens | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|--|----------------|------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Red junglefowl<br>(cont'd.)  | Oklahoma       | 1961 | 12                            | 1:4           | 160                   | 13.3                  | 140                          | 87.5               | 114                            | 106                          |
|  |                | 1962 | 34                            | 1:4           | 1033                  | 30.3                  | 861                          | 83.3               | 690                            | 465                          |
|  |                | 1963 | 60                            | 1:4           | 1368                  | 22.8                  | 1126                         | 82.4               | 986                            | 762                          |
|  | South Carolina | 1963 | 15                            | 1:5           | 0                     | -                     | -                            | -                  | -                              | -                            |
|  | Tennessee      | 1962 | 3 (1)                         | 1:3           | 4                     | 1.3                   | -                            | -                  | 1                              | 0                            |
|  |                | 1963 | 7                             | 1:3           | 0 (3)                 | -                     | 0                            | -                  | 0                              | 0                            |
|  | Virginia       | 1961 | 8                             | -             | -                     | -                     | -                            | -                  | -                              | -                            |
|  |                | 1962 | 13                            | 1:3-1:4       | 155                   | 11.9                  | 118                          | 74.8               | 110                            | 93                           |
|  |                | 1963 | 22                            | 1:5           | 443                   | 20.1                  | 257                          | 58.0               | 224                            | 143                          |
|  |                |      |                               |               |                       |                       |                              |                    |                                |                              |
| Western<br>Iranian<br>pheasant<br>(pure strain)<br>( <u>Phasianus</u><br><u>colchicus</u><br><u>talischensis</u> ) | Florida        | 1962 | 10                            | -             | 7                     | 0.7                   | -                            | -                  | 1                              | 0                            |
|  |                | 1963 | -                             | -             | 168                   | -                     | -                            | -                  | 96                             | 50                           |
|  | Kentucky       | 1961 | 16                            | 1:4           | 207                   | 13.0                  | 159                          | 77.0               | -                              | 99                           |
|  |                | 1962 | 20                            | 1:5           | 556                   | 27.8                  | 460                          | 83.6               | 354                            | 114                          |
|  |                | 1963 | 24                            | 1:6           | 590                   | 24.5                  | 479                          | 81.1               | 400                            | 327                          |
|  | Missouri       | 1960 | 8                             | 1:4           | 56                    | 7.0                   | 44                           | 78.6               | 25                             | 12                           |
|  |                | 1961 | 11                            | 1:5           | 28                    | 2.5                   | 27                           | 96.5               | 15                             | -                            |
|  |                | 1962 | 11                            | 1:5           | 33                    | 3.0                   | 24                           | 80.0               | 16                             | 13                           |
|  |                | 1963 | 56                            | 1:5           | 388                   | 6.9                   | 262                          | 79.1               | 206                            | 184 (2)                      |
|  | Ohio           | 1960 | 12                            | 1:1           | 2                     | 0.2                   | -                            | -                  | -                              | -                            |
|  |                | 1961 | 12                            | 1:1           | 16                    | 1.3                   | 10                           | 90.9 (4)           | 9                              | 0                            |
|  |                | 1962 | 4                             | 1:1           | 13                    | 3.3                   | 6                            | 50.0 (4)           | 4                              | 1                            |

(1) First year in captivity.

(2) Birds banded at 6 weeks.

(3) Coccidiosis in breeders

(4) Percentage based on eggs set in incubator, not on eggs laid.

FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species                                     | State     | Year | Number of<br>breeding<br>hens | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|---|-----------|------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Western<br>Iranian<br>pheasant<br>(cont'd.) | Oklahoma  | 1963 | 40                            | 1:4           | 628                   | 15.7                  | 488                          | 77.0               | 423                            | 368                          |
|   | Tennessee | 1960 | 8                             | 1:4           | 46                    | 5.8                   | -                            | -                  | 27                             | 18                           |
|   |           | 1961 | 14                            | 1:5           | 139                   | 9.2                   | -                            | -                  | 79                             | 59                           |
|   |           | 1962 | 43                            | 1:4           | 257                   | 5.6                   | -                            | -                  | 115                            | 78                           |
|   |           | 1963 | 56                            | 1:4           | 479                   | 8.6                   | 241                          | 50.3               | 167                            | 133                          |
|   | Virginia  | 1960 | 45                            | 1:4           | -                     | -                     | -                            | -                  | -                              | 275                          |
|   |           | 1961 | 64                            | 1:4           | 1107                  | 16.8                  | 929                          | 77.9               | 724                            | 540                          |
|   |           | 1962 | 75                            | 1:4           | 2099                  | 28.0                  | 1616                         | 77.0               | 1325                           | 978                          |
|   |           | 1963 | 69                            | 1:4           | 1858                  | 26.9                  | 1642                         | 88.3               | 1122                           | 898                          |
| Western<br>Iranian<br>ringneck<br>cross     | Alabama   | 1961 | 72                            | 1:7           | 365                   | 5.0                   | 186                          | 51.0               | 141                            | 126                          |
|   |           | 1962 | 62                            | 1:4-1:5       | 1109                  | 17.9                  | 817                          | 73.7               | 486                            | 437                          |
|   |           | 1963 | 50                            | 1:5           | 1000 +                | -                     | -                            | -                  | -                              | 420                          |
|   | Iowa      | 1961 | -                             | -             | 75                    | -                     | 52                           | 69.3               | 35                             | 35                           |
|   |           | 1962 | 10                            | 1:10          | 225                   | 22.5                  | 165                          | 60.0               | 150                            | 125                          |
|   |           | 1963 | none                          |               |                       |                       |                              |                    |                                |                              |
|   | Kentucky  | 1961 | 42                            | 1:4           | 2045                  | 48.7                  | 1147                         | 77.1               | 906                            | 745                          |
|   |           | 1962 | 36                            | 1:6           | 1382                  | 38.4                  | 1161                         | 84.6               | 877                            | 686                          |
|   |           | 1963 | 54                            | 1:6           | 2383                  | 44.1                  | 2054                         | 86.1               | 1567                           | 1356                         |
|   | Missouri  | 1960 | 24                            | 1:8           | 1176                  | 49.0                  | 834                          | 81.0               | 465                            | 361                          |
|   | Ohio      | 1960 | 24                            | -             | 810                   | 33.7                  | 714                          | 91.1 (1)           | 690                            | -                            |
|   | Oklahoma  | 1962 | 47 (F-1)                      | 1:7           | -                     | -                     | -                            | -                  | -                              | -                            |
|   |           |      | 7 (F-2)                       | 1:7           | 303                   | 43.3                  | 253                          | 83.5               | 208                            | 191                          |

(1) Percentage based on eggs set in incubator, not on eggs laid.

FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species   | State          | Year                           | Number of<br>breeding<br>hens | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|---|----------------|--------------------------------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Western<br>Iranian<br>ringneck<br>cross<br>(cont'd.)                                    | South Carolina | 1961                           | 25                            | 1:5           | -                     | -                     | -                            | -                  | -                              | 62                           |
|   |                | 1962                           | -                             | 1:5           | -                     | -                     | -                            | -                  | -                              | 60 †                         |
|   |                | 1963                           | -                             | -             | -                     | -                     | -                            | -                  | -                              | 200 †                        |
|   | Tennessee      | 1961                           | 40                            | 1:4           | 2258                  | 56.2                  | -                            | -                  | 1343                           | 1100                         |
|   |                | 1962                           | 45                            | 1:6           | 1477                  | 32.8                  | -                            | -                  | 880                            | 694                          |
|   |                | 1963                           | 100                           | 1:6           | 3459                  | 34.6                  | 2750                         | 79.5               | 2158                           | 1667                         |
|   |                | (Talish 3/4 x<br>ringneck 1/4) | 1962                          | 43            | 1:6                   | 1427                  | 33.2                         | -                  | 794                            | 648                          |
|   |                | 1963                           | Discontinued                  |               |                       |                       |                              |                    |                                |                              |
|   |                | (Talish 1/4 x<br>ringneck 3/4) | 1962                          | 48            | 1:6                   | 2460                  | 51.2                         | -                  | 1175                           | 961                          |
|   |                | 1963                           | Discontinued                  |               |                       |                       |                              |                    |                                |                              |
|   |                | Virginia                       | 1960                          | 40            | 1:5                   | -                     | -                            | -                  | -                              | 874                          |
|   |                |                                | 1961                          | 30            | 1:5                   | 1888                  | 62.9                         | 1507               | 1272                           | 944                          |
|   |                |                                | 1962                          | 30            | 1:5                   | 1981                  | 66.0                         | 1605               | 1316                           | 933                          |
|   |                |                                | 1963                          | 29            | 1:5                   | 1621                  | 56.0                         | 1243               | 1043                           | 834                          |
| Eastern<br>Iranian<br>pheasant<br>(pure strain)<br>(Phasianus<br>colchicus<br>persicus) | Iowa           | 1961                           | -                             | -             | 100                   | -                     | 79                           | 79.0               | 67                             | 58                           |
|   | Kentucky       | 1961                           | 10                            | 1:4           | 326                   | 32.6                  | 248                          | 76.1               | 112                            | 70                           |
|   |                | 1962                           | 20                            | 1:5           | 479                   | 23.9                  | 403                          | 85.0               | 320                            | 103                          |
|   |                | 1963                           | 22                            | 1:6           | 831                   | 37.7                  | 646                          | 77.7               | 518                            | 441                          |
|   | Missouri       | 1960                           | 24                            | 1:5           | 669                   | 27.8                  | 456                          | 68.2               | 342                            | 246                          |
|   |                | 1961                           | 24                            | 1:8           | 616                   | 25.6                  | 333 (1)                      | 80.1               | 246                            | -                            |
|   |                | 1962                           | 27                            | 1:5           | 686                   | 25.4                  | 444                          | 79.2               | 281                            | 221                          |
|   |                | 1963                           | 57                            | 1:5           | 2142                  | 37.6                  | 1592                         | 77.2               | 1266                           | 1124 (2)                     |

(1) 200 eggs sent to Iowa.

(2) Birds banded at 6 weeks.

FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species                                     | State     | Year | Number of<br>breeding<br>hens | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|---|-----------|------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Eastern<br>Iranian<br>pheasant<br>(cont'd.) | Ohio      | 1960 | 18                            | 1:2-1:5       | 52                    | 2.8                   | 44                           | 84.6               | 40                             | 21                           |
|   |           | 1961 | 22                            | 1:2-1:5       | 49                    | 2.2                   | 38                           | 90.5 (1)           | 27                             | 15                           |
|   |           | 1962 | 12                            | 1:4           | 194                   | 16.2                  | 158                          | 89.0               | 114                            | 44                           |
|   | Tennessee | 1960 | 10                            | 1:3           | 38                    | 3.8                   | -                            | -                  | 21                             | 8                            |
|   |           | 1961 | 15                            | 1:5           | 92                    | 6.1                   | -                            | -                  | 64                             | 40                           |
|   |           | 1962 | 32                            | 1:4           | 188                   | 6.0                   | -                            | -                  | 91                             | 62                           |
|   |           | 1963 | 48                            | 1:4           | 441                   | 9.2                   | 249                          | 56.5               | 188                            | 136                          |
|   | Virginia  | 1960 | 31                            | 1:4           | -                     | -                     | -                            | -                  | -                              | 326                          |
|   |           | 1961 | 64                            | 1:4           | 1970                  | 30.8                  | 1618                         | 82.1               | 1132                           | 985                          |
|   |           | 1962 | 58                            | 1:4           | 2134                  | 36.8                  | 1600                         | 75.0               | 1296                           | 832                          |
|   |           | 1963 | 59                            | 1:4           | 2010                  | 34.1                  | 1771                         | 88.1               | 1014                           | 811                          |
| Eastern<br>Iranian<br>ringneck<br>cross     | Illinois  | 1962 | 9                             | 1:4-1:5       | poor                  | -                     | -                            | -                  | -                              | 16                           |
|   |           | 1963 | 15                            | 1:5           | poor                  | 5                     | 21                           | 33.3               | 21                             | 18                           |
|   | Iowa      | 1962 | 10                            | 1:10          | 250                   | 25.0                  | 125                          | 50.0               | 100                            | 90                           |
|   |           | 1963 | 10                            | 1:10          | 240                   | 24.0                  | 145                          | 60.0               | 125                            | 105                          |
|   | Kentucky  | 1961 | 31                            | 1:3           | 976                   | 31.5                  | 735                          | 75.3               | 495                            | 301                          |
|   |           | 1962 | 19                            | 1:5           | 874                   | 46.0                  | 765                          | 88.5               | 654                            | 320                          |
|   |           | 1963 | 28                            | 1:6           | 1427                  | 51.0                  | 1208                         | 85.0               | 944                            | 820                          |
|   | Maryland  | 1960 | 7                             | 1:1           | 423                   | 60.4                  | -                            | -                  | 161                            | 104                          |
|   |           | 1961 | 29                            | 1:1           | 1070                  | 36.9                  | -                            | -                  | 679                            | 456                          |
|   |           | 1962 | 41                            | 1:3-1:4       | 694                   | 17.0                  | -                            | -                  | 327                            | 220                          |
|   |           | 1963 | 44                            | 1:4           | 988                   | 22.0                  | -                            | -                  | 544                            | 500                          |
|   | Missouri  | 1960 | 18                            | 1:6           | 1059                  | 58.8                  | 887                          | 85.8               | 648                            | -                            |

(1) Percentage based on eggs set in incubator, not on eggs laid.

## FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species  | State                            | Year | Number of<br>breeding<br>hens | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|--|----------------------------------|------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Eastern  | Tennessee                        | 1961 | 220                           | 1:5           | 10900                 | 49.5                  | -                            | -                  | 7365                           | 5826                         |
| Iranian  |                                  | 1962 | 60                            | 1:6           | 2582                  | 43.0                  | -                            | -                  | 1434                           | 1144                         |
| ringneck<br>cross<br>(cont'd.)                                       |                                  | 1963 | 50                            | 1:5           | 1010                  | 20.2                  | 829                          | 82.1               | 703                            | 535                          |
|  | (Persicus 3/4<br>x ringneck 1/4) | 1962 | 60                            | 1:6           | 2399                  | 40.0                  | -                            | -                  | 1142                           | 894                          |
|  | (Persicus 1/4<br>x ringneck 3/4) | 1963 | discontinued                  |               |                       |                       |                              |                    |                                |                              |
|  |                                  | 1962 | 166                           | 1:6           | 3042                  | 46.0                  | -                            | -                  | 2189                           | 1934                         |
|  |                                  | 1963 | discontinued                  |               |                       |                       |                              |                    |                                |                              |
|  | Virginia                         | 1960 | 45                            | 1:5           | -                     | -                     | -                            | -                  | -                              | 1203                         |
|  |                                  | 1961 | 30                            | 1:5           | 1815                  | 60.5                  | 1393                         | 76.8               | 1218                           | 907                          |
|  |                                  | 1962 | 35                            | 1:5           | 2170                  | 62.0                  | 1714                         | 79.0               | 1422                           | 973                          |
|  |                                  | 1963 | 34                            | 1:5           | 1379                  | 40.6                  | 1007                         | 73.0               | 820                            | 689                          |
| Western and<br>Eastern<br>Iranian,<br>Ohio ringneck cross            | Ohio                             | 1960 | 160                           | 1:4-1:8       | 2244                  | 14.0                  | 1885                         | 87.7               | 1751                           | 1000 ±                       |
|  |                                  | 1961 | 284                           | flock         | 3325                  | 11.7                  | 2557                         | 88.6 (1)           | 2185                           | 1041                         |
| Japanese green<br>pheasant<br>(Phasianus<br>colchicus<br>robustipes) | Illinois                         | 1962 | 96                            | 1:7           | poor                  | -                     | -                            | -                  | -                              | 150                          |
|  |                                  | 1963 | 75                            | 1:7           | poor                  | 7.0                   | 250                          | 40.0               | 230                            | 200                          |
|  | Kentucky                         | 1962 | 30                            | flock         | 128                   | 4.3                   | 104                          | 81.3               | 54                             | 0                            |
|  |                                  | 1963 | 75                            | -             | -                     | -                     | -                            | -                  | -                              | -                            |
|  | Maryland                         | 1963 | 15                            | -             | -                     | -                     | -                            | -                  | -                              | -                            |

(1) Percentage based on eggs set in incubator, not on eggs laid.

FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species   | State     | Year | Number of<br>breeding<br>hens | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|---|-----------|------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Japanese green<br>pheasant<br>(cont'd.)                               | Ohio      | 1960 | 165                           | 1:5-1:10      | 1825                  | 11.0                  | 1271                         | 77.4               | 1181                           | 680                          |
|   |           | 1961 | 373                           | flock         | 1402                  | 3.8                   | 969                          | 86.5 (1)           | 697                            | 340                          |
|   |           | 1962 | 18                            | 1:2-1:5       | 349                   | 19.4                  | 198                          | 90.0 (1)           | 170                            | 74                           |
|   | Tennessee | 1961 | 15                            | 1:3           | 398                   | 26.5                  | -                            | -                  | 230                            | 173                          |
|   |           | 1962 | 81                            | 1:4           | 2712                  | 33.5                  | -                            | -                  | 1576                           | 1190                         |
|   |           | 1963 | 95                            | 1:5           | 2131                  | 22.4                  | 1627                         | 76.3               | 1399                           | 1117                         |
|   | Virginia  | 1960 | 52                            | 1:3           | -                     | -                     | -                            | -                  | -                              | 400                          |
|   |           | 1961 | 60                            | 1:3           | 1898                  | 31.6                  | 1611                         | 84.8               | 1291                           | 949                          |
|   |           | 1962 | 57                            | 1:3           | 2306                  | 40.6                  | 1891                         | 82.0               | 1588                           | 1043                         |
|   |           | 1963 | 73                            | 1:3           | 2394                  | 32.8                  | 1993                         | 83.2               | 1588                           | 1302                         |
| Japanese<br>green<br>ringneck<br>cross                                | Tennessee | 1962 | 72                            | 1:6           | 2964                  | 41.0                  | -                            | -                  | 1543                           | 1349                         |
|   |           | 1963 | 70                            | 1:5           | 2926                  | 41.8                  | 1900                         | 65.0               | 1561                           | 1236                         |
| Korean<br>ringneck<br>pheasant<br>(Phasianus<br>colchicus<br>karpowi) | Illinois  | 1960 | 1                             | 1:1           | -                     | -                     | -                            | -                  | 19                             | 10 ±                         |
|   |           | 1961 | 11                            | flock         | -                     | -                     | -                            | -                  | -                              | -                            |
|   |           | 1962 | 25                            | 1:5           | -                     | -                     | -                            | -                  | -                              | 150                          |
|   |           | 1963 | 21                            | 1:7           | poor                  | 15.0                  | -                            | -                  | -                              | 150                          |
|   | Indiana   | 1962 | 113                           | flock         | 669                   | 5.9                   | -                            | -                  | 401                            | 190                          |
|   |           | 1963 | 152                           | 1:6-1:8       | 2345                  | 15.5                  | 2253                         | 96.0               | 1419                           | 900                          |
|   | Missouri  | 1960 | 3                             | 1:1           | 93                    | 31.0                  | 71                           | 87.1               | 70                             | 36                           |
|   |           | 1961 | 12                            | 1:2           | 372                   | 31.1                  | 342                          | 91.4               | 264                            | -                            |
|   |           | 1962 | 38                            | 1:5           | 1035                  | 27.2                  | 827                          | 87.8               | 733                            | 536 (2)                      |
|   |           | 1963 | 51                            | 1:5           | 2338                  | 45.8                  | 1926                         | 86.3               | 1771                           | 1532                         |

(1) Percentage based on eggs set in incubator, not on eggs laid

(2) Birds banded at 6 weeks.

FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species   | State        | Year | Number of<br>breeding<br>hens | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|---|--------------|------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Korean<br>ringneck<br>pheasant<br>(Cont'd.)   | Ohio         | 1960 | 4                             | 1:2           | 106                   | 26.5                  | 62                           | 63.3               | 61                             | 48                           |
|   |              | 1961 | 18                            | 1:2           | 594                   | 33.0                  | 362                          | 82.7               | 315                            | 145                          |
|   |              | 1962 | 23                            | 1:2           | 610                   | 26.5                  | 354                          | 89.0 (1)           | 302                            | 138                          |
|   | Pennsylvania | 1960 | 5                             | -             | -                     | -                     | -                            | -                  | -                              | 50 $\frac{1}{2}$             |
|   |              | 1961 | -                             | -             | -                     | -                     | -                            | -                  | -                              | 300 $\frac{1}{2}$            |
|   |              | 1962 | 108                           | flock         | 1400                  | 13                    | 1070                         | 88.0               | 909                            | 806                          |
|   |              | 1963 | 195                           |               | 1438                  | 7                     | 1233                         | 86.0               | 1029                           | 940                          |
| 45<br>Afghan<br>white-<br>winged<br>pheasant<br>( <u>Phasianus</u><br><u>colchicus</u><br><u>bianchii</u> ) | California   | 1963 | 10                            | 1:1           | 332                   | 33.2                  | -                            | -                  | 184                            | 112                          |
|   | Missouri     | 1960 | 4                             | 1:4           | 49                    | 12.2                  | 48                           | 98.0               | 39                             | 24                           |
|   |              | 1961 | 12                            | 1:6           | 73                    | 6.1                   | 38                           | 52.1               | 27                             | -                            |
|   |              | 1962 | 15                            | 1:5           | 191                   | 12.7                  | 110                          | 67.9               | 88                             | 85                           |
|   |              | 1963 | discontinued                  |               |                       |                       |                              |                    |                                |                              |
|   | New Mexico   | 1959 | 2                             | 1:1           | 50                    | 25.0                  | -                            | -                  | 29                             | -                            |
|   |              | 1960 | 11                            | -             | 129                   | 11.7                  | -                            | -                  | 67                             | -                            |
|   |              | 1961 | 36                            | -             | 605                   | 16.8                  | -                            | -                  | 313                            | -                            |
|   |              | 1962 | 170                           | 1:5           | 1888                  | 11.1                  | -                            | -                  | 1067                           | 1003                         |
|   |              | 1963 | 359                           | 1:5           | 5889                  | 16.4                  | 4324                         | 73.4               | 2760                           | 2340                         |
|   | Ohio         | 1960 | 3                             | 1:1           | 46                    | 15.3                  | 42                           | 91.3               | 41                             | 17                           |
|   |              | 1961 | 8                             | 1:1-1:2       | 83                    | 10.4                  | 71                           | 98.6 (1)           | 53                             | 24                           |
|   |              | 1962 | 13                            | 1:2           | 63                    | 4.8                   | 52                           | 83.0               | 30                             | 21                           |

(1) Percentage based on eggs set in incubator, not on eggs laid.

# FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species                                      | State     | Year        | Number of<br>breeding<br>hens | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|--|-----------|-------------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Afghan white-winged<br>pheasant<br>(cont'd.) | Oklahoma  | 1960        | 5                             | 1:5           | 28                    | 5.6                   | 27                           | 96.4               | 24                             | 17                           |
|  |           | 1961        | 12                            | 1:12          | 132                   | 11.0                  | 86                           | 65.1               | 71                             | 48                           |
|  |           | 1962        | 27                            | 1:5           | 122                   | 4.5                   | 80                           | 65.5               | 49                             | 34                           |
|  |           | 1962        | 130                           | 1:7           | 3534                  | 26.4                  | 2298                         | 65.0               | 1749                           | 1352                         |
|  |           | (F-2 cross) |                               |               |                       |                       |                              |                    |                                |                              |
|  |           | 1963 (F-2)  | 46                            | 1:5           | 432                   | 9.4                   | 259                          | 59.9               | 219                            | 180                          |
|  |           | (F-3)       | 130                           | 1:5           | 1776                  | 13.7                  | 1144                         | 64.4               | 1033                           | 802                          |
|  | Utah      | 1961        | 4                             | -             | -                     | -                     | -                            | -                  | -                              | -                            |
|  |           | 1962        | 7                             | 1:2-1:3       | 49                    | 7.0                   | 26                           | 53.1               | 17                             | 6                            |
|  |           | 1963        | 14                            | 1:1,1:4,1:5   | 358                   | 25.6                  | 204                          | 60.0               | 150                            | 80                           |
| White<br>crested                             | Oregon    | 1962        | 3 (1)                         | 1:1           | 24(2)                 | 8.0                   | 16                           | 66.6               | 16                             | 10                           |
|  |           | 1963        | 7                             | 1:1           | 71                    | 10.0                  | 40                           | 60.6               | 37                             | 30                           |
| Kalig<br>pheasant                            | Tennessee | 1961 (3)    | 2                             | 2:2           | 0                     | 0                     | 0                            | 0                  | 20                             | 0                            |
| (Lophura                                     |           | 1962 (4)    | 5                             | 1:2           | 27                    | 5.4                   | -                            | -                  | 23                             | 17                           |
| <u>leucomelana</u><br><u>hamiltoni</u> )     |           | 1963        | 8                             | 1:1           | 142                   | 17.8                  | 114                          | 80.3               | 98                             | 72                           |
|  | Virginia  | 1961 (3)    | 8                             | 1:1-1:2       | 162                   | 20.3                  | 114                          | 70.4               | 94                             | 82                           |
|  |           | 1962        | 29                            | 1:2-1:4       | 371                   | 12.8                  | 278                          | 75.2               | 261                            | 228                          |
|  |           | 1963        | 32                            | 1:1           | 776                   | 24.2                  | 655                          | 84.4               | 521                            | 382                          |

(1) Breeders obtained from private game farms in the United States. Only one female laid.

(2) Only one hen laid.

(3) Wild trapped birds, first year in captivity.

(4) Hand-raised birds.



# FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

Except for wild-trapped Reeves pheasants, breeding stock of the following species were obtained by the States indicated from private breeders or other States.

| Species  | State                          | Year | Number of<br>breeding<br>hens | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatches | Number<br>of birds<br>raised |
|--|--------------------------------|------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Reeves<br>pheasant<br>( <i>Syrnaticus<br/>reevesii</i> ) | Illinois (1)<br>(game-farm)    | 1962 | 16                            | 1:4           | good                  | -                     | -                            | -                  | -                              | 348                          |
|  |                                | 1963 | 20                            | 1:4           | very good             |                       |                              |                    |                                | 442                          |
|  | Iowa (1)<br>(game-farm)        | 1961 | -                             | -             | 210                   | -                     | 110                          | 52.4               | 79                             | 57                           |
|  |                                | 1962 | 38                            | 1:2           | 876                   | 23.0                  | 438                          | 50.0               | 278                            | 123                          |
|  |                                | 1963 | 75                            | 1:2           | 1621                  | 21.6                  | 962                          | 59.3               | 601                            | 415                          |
|  | Kentucky (1)<br>(game farm)    | 1960 | 200                           | 1:7           | 6429                  | 32.1                  | 5060                         | 78.8               | 3607                           | 2135                         |
|  |                                | 1961 | 182                           | 1:7           | 6352                  | 34.9                  | 4512                         | 71.3               | 1811                           | 1125                         |
|  |                                | 1962 | 217                           | 1:7           | 8141                  | 37.5                  | 6536                         | 81.0               | 3972                           | 2615                         |
|  |                                | 1963 | 80                            | 1:6           | 2091                  | 26.1                  | 1623                         | 77.6               | 1191                           | 1054                         |
|  | Missouri<br>(wild-<br>trapped) | 1960 | 14                            | 1:7           | 10                    | 0.7                   | 0                            | 0                  | 0                              | 0                            |
|  |                                | 1961 | 12                            | 1:6           | 21                    | 1.6                   | 0                            | 0                  | 0                              | 0                            |
|  |                                | 1962 | 5                             | 1:5           | 30                    | 6.0                   | 2                            | 7.6                | 2                              | 1                            |
|  |                                | 1963 | 1                             | 1:1           | 52                    | 52.0                  | 47                           | 79.6               | 40                             | 31                           |
|  | Ohio<br>(wild-<br>trapped)     | 1960 | 15                            | 1:2-1:5       | 45                    | 3.0                   | 20                           | 54.1 (2)           | 16                             | 7                            |
|  |                                | 1961 | 13                            | 1:2-1:5       | 183                   | 14.1                  | 117                          | 83.6 (2)           | 88                             | 66                           |
|  |                                | 1962 | 25                            | 1:2-1:5       | 239                   | 9.6                   | 169                          | 74.1 (2)           | 120                            | 75                           |
|  |                                | 1963 | none bred                     |               |                       |                       |                              |                    |                                |                              |
|  | Ohio (1)<br>(game farm)        | 1960 | 572                           | flock         | 15998                 | 28.0                  | 10526                        | 74.3 (2)           | 8736                           | 6176                         |
|  |                                | 1961 | 710                           | "             | 19792                 | 27.9                  | 10791                        | 60.2 (2)           | 9114                           | 6763                         |
|  |                                | 1962 | 9                             | 1:5           | 61                    | 6.8                   | 50                           | 85.0 (2)           | 31                             | 19                           |
|  |                                | 1963 | none bred                     |               |                       |                       |                              |                    |                                |                              |

(1) Breeders were the best obtainable from private game farms in the United States.

(2) Percentages based on eggs set in incubator, not on eggs laid.

# FOREIGN GAME INTRODUCTION PROGRAM

Table 2. Summary of Foreign Game Bird Propagation Results - 1960-1963 (continued)

| Species  | State                           | Year | Number of<br>breeding<br>hens | How<br>Penned | Total<br>eggs<br>laid | Average<br>per<br>hen | Number<br>of eggs<br>fertile | Percent<br>fertile | Number<br>of chicks<br>hatched | Number<br>of birds<br>raised |
|--|---------------------------------|------|-------------------------------|---------------|-----------------------|-----------------------|------------------------------|--------------------|--------------------------------|------------------------------|
| Reeves<br>pheasant<br>(cont'd.)                                  | Tennessee<br>(wild-<br>trapped) | 1960 | 8                             | 1:2           | 0                     | 0                     | 0                            | 0                  | 0                              | 0                            |
|  |                                 | 1961 | 8                             | 1:8           | 75                    | 9.4                   | -                            | -                  | 28                             | 19                           |
|  |                                 | 1962 | 15                            | 1:3           | 86                    | 5.7                   | -                            | -                  | 34                             | 19                           |
|  |                                 | 1963 | 25                            | 1:4           | 381                   | 15.2                  | 236                          | 61.9               | 175                            | 84                           |
|  | Virginia<br>(game-farm)         | 1960 | 15<br>discontinued            | 1:7           | -                     | -                     | -                            | -                  | -                              | 264                          |
| Reeves<br>pheasant<br>Ohio ringneck<br>cross                     | Ohio                            | 1960 | 6                             | 1:2           | 159                   | 26.5                  | 9                            | 6.0 (1)            | 8                              | 5                            |
|  |                                 | 1961 | 6                             | 1:2           | 107                   | 17.8                  | 0                            | 0.0                | 0                              | 0                            |
|  |                                 | 1962 | discontinued                  |               |                       |                       |                              |                    |                                |                              |
| Ohio ringneck,<br>Reeves cross                                   | Ohio                            | 1960 | 8                             | 1:2           | 73                    | 9.1                   | 31                           | 47.0 (1)           | 28                             | 8                            |
|  |                                 | 1961 | 6                             | 1:2           | 153                   | 25.8                  | 1                            | 0                  | 0                              | 0                            |
|  |                                 | 1962 | discontinued                  |               |                       |                       |                              |                    |                                |                              |
| Reeves, Ohio<br>ringneck<br>hybrid                               | Ohio                            | 1960 | 167                           | 1:2-1:5       | 4117                  | 24.6                  | 1455                         | 38.7 (1)           | 1088                           | 515                          |
|  |                                 | 1961 | 301                           | 1:2-1:5       | 9757                  | 32.4                  | 3430                         | 35.0 (1)           | 1967                           | 1160                         |
|  |                                 | 1962 | discontinued                  |               |                       |                       |                              |                    |                                |                              |
| Elliot's<br>pheasant<br>( <u>Syrmaticus</u><br><u>elliotti</u> ) | Ohio                            | 1960 | 169 (2)                       | 1:2-1:5       | 1941                  | 11.4                  | 827                          | 49.2               | 649                            | 255                          |
|  |                                 | 1961 | 4                             | 1:2           | 57                    | 14.3                  | 26                           | 57.8               | 22                             | 8                            |
|  |                                 | 1962 | 2                             | 1:2           | 31                    | 15.5                  | 14                           | 51.8               | 9                              | 5                            |
|  |                                 | 1963 | discontinued                  |               |                       |                       |                              |                    |                                |                              |
| Himalayan<br>snow cock<br>( <u>Tetraogallus himalayensis</u> )   | Nevada                          | 1963 | 5                             | 1:1           | 3 (3)                 | 0.6                   | 3                            | 100                | 1                              | 0                            |

(1) Percentages based on eggs set in incubator, not on eggs laid.

(2) Breeders obtained from private game farms in the United States.

(3) All eggs laid by one hen. Fowl pox outbreak disturbed breeders.

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